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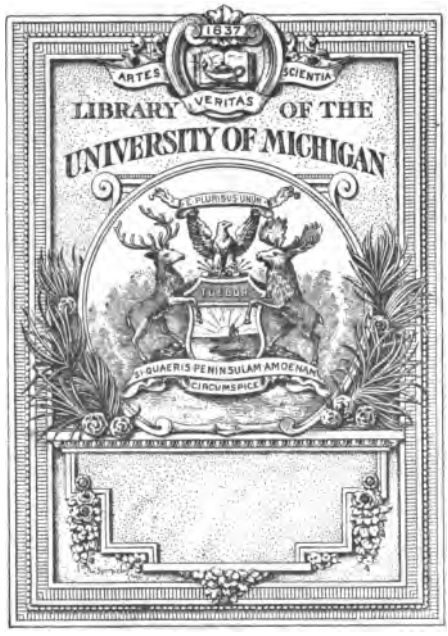
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THE

WESTMINSTER HOSPITAL REPORTS.

EDITED BY

H. B. DONKIN, M.B. Oxon., F.R.C.P.,

AND

C. MACNAMARA, F.R.C.S.

VOLUME I.

LONDON:

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1885.

PREFACE.

The object of this Series of Annual Reports is to supply past and present members of the Hospital and School and others who may be interested in the subject-matter with a fuller account of the work of the Hospital than can be given in the somewhat jejune statistics usually issued under the name of 'Registrar's Reports.'

It will be the Editors' aim to confine the material of these volumes as much as possible to articles or short papers mainly based on or illustrated by cases occurring and work done at Westminster Hospital, though instances taken from other sources will not of course be excluded. It is hoped that by this means the title of the Series will be justified and the interest of the readers maintained. The department headed *Short Notes and Cases* will contain brief accounts of cases or remarks on subjects of interest which seem either for their rarity or for some point of practical importance to deserve record. To this department it

is hoped that the Residents and other Officers of the Hospital will continue to contribute.

The Editors give their sincere thanks to Mr. C. A. Hebbert, now Demonstrator of Anatomy, and lately Medical Registrar at Westminster, for his valuable suggestions and help in this undertaking.

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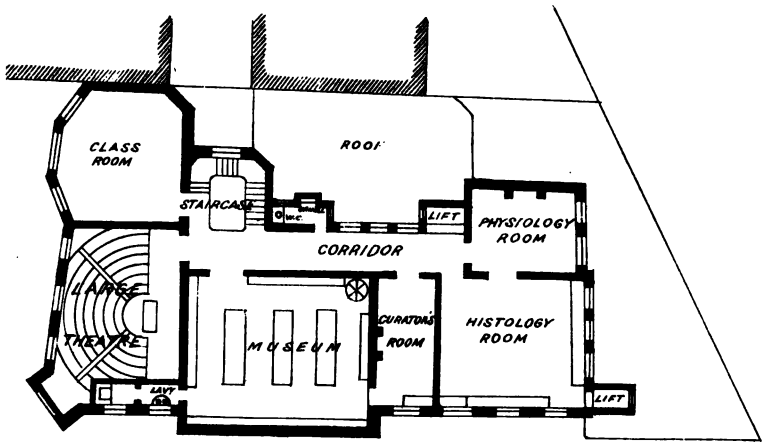

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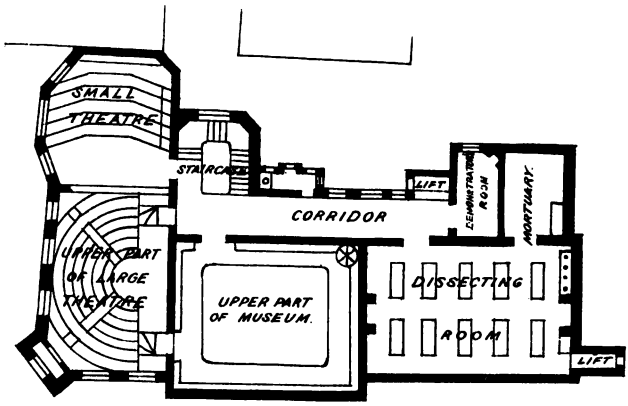

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SOME ACCOUNT

OF

WESTMINSTER HOSPITAL AND ITS MEDICAL SCHOOL.

By GEORGE COWELL.

WESTMINSTER HOSPITAL owes its origin to a meeting which was held at St. Dunstan's Coffee House on January 14th, 1715, 171 years ago, and exactly a century after Harvey delivered his first course of lectures at the College of Physicians. The entry in the first minute book of the hospital is as follows: "Mr. Henry Hoare, Mr. William Wogan, Mr. Robert Witham, and Mr. (Rev.) Patrick Cockburn being met together to consult upon the most effectuall methods for relieving the sick and needy." Ten pounds were ordered "to be disposed of by Mr. Witham in the severall prisons, viz. Newgate, the King's Bench, the Fleet, White Chapple, the Clink, and Marshalsea." At the third meeting, held on February 6th, Mr. Wogan reported that "Eliza Cason, being sick of a leprosy, was placed into St. Bartholomew's Hospitall, and eighteen shillings depossited according to custom, and the charges of getting her in, &c., were paid." "Agreed that the same be allowed."

The following are among the entries on "Munday, 12 Mar., 1715/6." "Ordered, that Mr. Savile do salivate Ann Baker, and do what is further necessary to her cure." "And that he give John Ross three purges after his cure." These extracts sufficiently show the nature of the work at first undertaken.

On December 2nd, 1719, we find St. Dunstan's Coffee House the scene of a larger meeting, and the following entry in the minute book: "After long intermission, it having pleased Almighty God to stir up the hearts of some persons to revive the charitable design of relieving the sick and needy, the following persons met this day by appointment in order to consider the most proper and effectuall methods for putting the same in execution."

On March 25th, 1720, a house was taken in Petty France, now York Street, near St. James's Park, at a yearly rental of £22, and a sum of money was ordered to be expended to fit it for the reception of patients. Hitherto a room only had been rented as a repository for medicines.

On May 11th, "The question was put, whether the Society shall begin to admit any patients into the house. Resolved in the affirmative, and that John Kelly be entertained and taken in to-morrow."

At this time the only hospitals which existed for the medical and surgical relief of the sick poor were St. Bartholomew's and St. Thomas's, both having been established and carried on by the religious houses of their respective neighbourhoods, and created Royal Hospitals, soon after the suppression of the monasteries in 1537. Westminster is remarkable as having been the first hospital in London which trusted for its support to the voluntary contributions of the public. Guy's Hospital, founded by the munificence of one individual, was established a year later.

The hospital in Petty France was opened under the name of "Infirmary for the Sick and Needy." Perhaps it will be interesting to record the names and ailments of the first few patients that were admitted:—"May 11, 1720, John Kelly, evil in his joints and scurvy; May 18, Ann Phillips, hysterick cholick and headach; Catherine Cam, asthma and dropsy; May 25, Adrian van Reyney, consumption; June 15, Catherine Moor, scorbutick rheumatism; Mary Harris, obstructions; Charles Dunlop,* æt. 8, a carious bone in his knee; June 29, Sarah Stevenson, scurvy and palsy; Sarah Whitehead, a degree of leprosy."

From the early records of the hospital it appears that no

* See Appendix 1.

formalities were observed in the appointment of the earlier medical officers. Physicians, surgeons, local practitioners and apothecaries offered their services to the Governors, and in some cases the offer alone is recorded; in others there is a record in the minutes of the offer of such services having been duly accepted. Of those whose names appear as working for the Society in its early days are the following, with the dates of joining. As physicians: Sir John Colbatch, April 3rd, 1716; Dr. Alexander Stuart, December 9th, 1719; and Dr. William Wasey, May 4th, 1720. As local surgeons: Mr. Harris, Mr. Small, Mr. Webb, and Mr. St. André. As principal surgeons: Mr. Claudius Amyand, November 8th, 1721; and Mr. Ambrose Dickens, December 20th, 1721; both sergeant-surgeons to King George I.

The usefulness of the institution seems to have rapidly developed, for its supporters soon found it necessary to seek the means to remove the hospital to a larger house in Chapel Street, at a rent of £35, where it was opened on June 10th, 1724, with sixty beds. At this time Cheselden, the teacher of John Hunter, was appointed principal surgeon, a post which he held until 1733,* when he became lithotomist and consulting surgeon. His portrait hangs in the Board-room of the hospital. A few days later the celebrated and courtly Mead, Queen Anne's physician, whose monument is in Westminster Abbey, having recently removed from Austin Friars to Dr. Radcliffe's house in Bloomsbury Square, retired from the post of physician to St. Thomas's Hospital, in the Borough, and became a subscriber to this hospital, and gave to it his assistance for a short time as consulting physician.

In 1733, the removal of the hospital to a larger building again became necessary, and a warm discussion arose among the Governors as to the comparative eligibility of three houses in Castle Lane, Petty France, and James Street, and of Lanesborough House at Hyde Park Corner. The majority considered the latter admirable site too far from the poor of Westminster, and determined to purchase the building in James Street. This was fitted up and opened in January, 1733/4, with 100 beds. The minority of the Governors, with the greater part of the medical staff, were dissatisfied with

* See Appendix 2.

this decision, and determined to purchase the lease of Lanesborough House, which, in their opinion, "on account of the strength of the building and the airiness of the situation was much more convenient to answer the ends of charity." This is the origin of St. George's Hospital, which was first opened on January 1st, 1733/4, with thirty beds.

In James Street, the Westminster Hospital carried on its work for nearly 101 years,* but the building having become dilapidated and the accommodation insufficient, the requisite money was collected and a very eligible site† was obtained in the Broad Sanctuary, under the very shadow of the grand old Abbey. The new building was well and solidly constructed upon a block of concrete, and was remarkable for its thoroughly efficient drainage and ventilation. The removal of the patients from the old hospital to the new was effected on November 14th, 1834, the resident medical officers at the time being Dr. Basham and Mr. Henry Hancock. Westminster had for some years enjoyed a great reputation for its clinical teaching, and at this time its surgeons were Sir Anthony Carlisle, Mr. Anthony White, Mr. Guthrie, and Mr. W. Lynn, Mr. Lynn, senior, having been appointed consulting surgeon a few months before, after nearly sixty years' service as surgeon. Its physicians were Sir George L. Tuthill, Dr. Bright, and Dr. Hamilton Roe. The Westminster Hospital, first so called in 1754, obtained its charter of incorporation in 1836.

For some years after the opening of the new building the Board-room was the scene of storms and contentions, and especially on the occasions of elections of medical officers. The medical staff was divided into two antagonistic parties, one of which was headed by Mr. Guthrie. Each party had its clerical and lay adherents amongst the Governors, and it will be seen subsequently how these differences militated against the establishment and success of the Medical School. Party spirit culminated on two different occasions in the trial before the Committee of a member of the surgical staff for alleged professional incompetency. Early in 1840, Sir Anthony Carlisle, the senior surgeon, who was getting into

* See Appendix 3.
† See Appendix 4.

years, was attacked for his treatment of two patients, and an investigation of the matter was made by the Committee. The attack failed, however, in its object, the evidence containing many misrepresentations and exaggerations which broke down on cross-examination. A significant occurrence in the inquiry was the riotous conduct of the students, who resented the attack upon the senior surgeon. The other attack was upon Mr. Hale Thompson, who for several reasons was exceedingly unpopular with the students and with his colleagues. In 1844 a charge was brought before the House Committee by some of his colleagues, indefinite in its form, but accusing him in so many words of ignorance and incompetency. The inquiry, which lasted several days, failed, as it soon became evident that it was mixed up with much personal feeling. Mr. Thompson was ably defended by Mr. J. F. Clarke, who was for many years on the editorial staff of the 'Lancet.' In his speech he characterised the inquiry as a persecution and a conspiracy, odious for its personal bias, and unprecedented in the manner in which it was conducted. He compared the trial with that of Warren Hastings. He denounced the witnesses, and concluded with a quotation from the justly styled "Prince of English Surgeons," Sir Astley Cooper, that "the merest blockhead might find fault, but it required a man of intelligence to appreciate the true character and abilities of a surgeon." The charges against Mr. Thompson were negatived by a considerable majority. There is an interesting account of this trial in Mr. Clarke's 'Autobiographical Recollections of the Medical Profession.'

Well constructed as was the hospital building, sanitary science was, in 1834, but little understood. In forty years a great advance was made in this respect, and changes of an expensive kind became imperatively necessary, if the hospital was to offer to its patients and to its students the full benefit of the new knowledge. The Governors, who are always ready to promote the improvements that must from time to time be necessary, rallied round the Staff and Committee, and a sum of nearly £18,000 was collected and expended in carrying out some very substantial repairs, improvements, and additions to the building. The whole of the arrange-

ments for the supply of water to the wards was changed. Towers were erected to provide sculleries and water-closets outside the wards, with cross ventilation, separate cisterns, &c., and bath-rooms and lavatories were built. The floors of the wards were relaid and covered with oak parquetry and polished. Chloroform and consultation rooms were added on either side of the operation theatre. The greater part of the hospital was raised another story, affording dormitories for the nurses in front, day wards at the ends of the building for the convalescent patients, and separate buildings at the back, quite outside the hospital, but approached by a covered way, and divided into small wards, which, at one end of the hospital, are set apart for the immediate isolation of cases of infection occurring in the wards, and at the other, are usually appropriated to operation and other cases of a special character. Healthy and airy as the hospital was before these alterations were made, the condition and appearance of the wards are now much improved, and in the surgical wards, the admirable sanitary arrangements and the polished floors together have reduced the cases of erysipelas by more than one half.

The success of these improvements rendered more evident the defects in the rooms devoted to the out-patient department. His Royal Highness the Prince of Wales as Chairman of a Dinner on March 13th, 1880, organised for the purpose of promoting further improvements, in the course of his speech proposing "*Success to the Westminster Hospital,*" said :—"Unfortunately, the necessary improvements are not all complete, and the out-patient department, in particular, requires attention. Besides other drawbacks, the rooms are too small, and being in the basement, too dark. The Medical School buildings are inconvenient and too small, and a larger surgery for the treatment of street accidents, and more accommodation for resident officers and nurses are required. The utmost has been made of the space belonging to the hospital, and there is only one way in which the improvements in question can be carried out—viz. by buying a small site near the hospital. This, of course, will require a large sum, and those who are disposed to be charitable can greatly advance the welfare of the poor in the district

and the interests of the hospital by liberally coming forward in aid of this most admirable institution."

Thus it became a recognised fact that the first step towards reconstructing the out-patient department was the acquisition of a suitable freehold site upon which a new Medical School could be built, a step in which the medical staff and lecturers heartily acquiesced as the Medical School had considerably outgrown its accommodation at the back of the hospital.

Although the hospital had long been a school of clinical medicine and surgery, students had to attend one or other of the private schools for their systematic instruction, such as those of Little Windmill Street, where Mr. Guthrie lectured on surgery; Dermott's School at the Westminster Dispensary, Gerrard Street, Soho; and the Great Windmill Street School. The first attempt to establish a school in the neighbourhood of the Westminster Hospital was made in 1833, when we find from the students' number of the 'Lancet' Sept. 28th of that year, that Mr. Dobson and Mr. Crump, with Drs. Weatherhead, Ryan, and Epps opened a "Westminster School of Medicine" at No. 2, Prince's Street, Story's Gate. It was not a success. In the following year a more vigorous effort was made and a strong Medical School was established in premises in Dean Street. The cost of the building amounted to nearly £3000 and was defrayed by the lecturers themselves. Mr. Guthrie and Mr. Hale Thompson, surgeon and assistant surgeon to the hospital, and Dr. Robert Bentley Todd were its founders, and they were joined by some of the teachers of the abortive school of the preceding year and others, and supported by several of the Governors of the Hospital. Mr. Guthrie himself opened the school on Wednesday, Oct. 1st, 1834, by delivering the first introductory lecture. The formation of the school was the subject of much bitter dissension between Mr. Guthrie and the other officers of the institution.

Mr. Guthrie, who was supported in his views by the Treasurer of the hospital, desired that the school should be connected with the hospital and demanded for it the name of "Westminster Hospital Medical School." Party spirit ran high and the permission to use this title was warmly

opposed by the other surgeons and physicians, ostensibly on the ground that but two medical officers were lecturers in the school. The question was decided by the Governors by a small majority, with a ballot, against Mr. Guthrie. Sir George Tuthill and Dr. Roe made an attempt to organise another "Westminster Hospital School," but the scheme fell through for a time from the difficulty of finding suitable premises. Mr. Guthrie's connection with the Medical School as Lecturer on Surgery continued for four years, when he was succeeded by Mr. Benjamin Phillips, F.R.S., who subsequently became Assistant Surgeon and Surgeon to the Hospital.

It was not until 1841 that the rest of the staff and the Governors generally recognised the "paramount importance of a school of medicine in connection with the hospital" and that a general appeal was made for pecuniary aid. In September of that year a deed of settlement of the "Westminster Hospital School of Medicine" was drawn up agreeing to purchase of the proprietors the school in Dean Street for £2412 10s., voluntary contributions having been obtained to the amount of £1407, of which £685 was contributed by the medical officers. £1500 was borrowed on mortgage at 5 per cent. to complete the purchase and to carry out certain repairs at a cost of £140. The school was not very prosperous, and the falling off in the number of students led to the retirement in the middle of the session 1846/7 of Dr. Hunter, the lecturer on anatomy. He was succeeded in the lectureship on anatomy and physiology by his coadjutor, Mr. Erichsen, and in his lectures on practical anatomy, first by Mr. Pennell and then by Mr. Holt. But Dr. Hunter had withdrawn a considerable portion of his anatomical museum, and on the occasion of the transfer from Mr. Pennell to Mr. Holt the Council of the College of Surgeons considering, on due inspection, that what was left was not sufficient for the adequate illustration of the lectures, withdrew their recognition of the anatomical lectures in the school. This was temporarily a great misfortune. The students were transferred for their anatomical studies to King's College, and Mr. Holthouse, who had for some years been the lecturer on anatomy at the Aldersgate Street School came to

the rescue, and by much self-denying labour made the museum again deserving of recognition by the examiners of the College. The school continued to occupy the premises in Dean Street until the year 1848, when they were bought up by the Westminster Improvement Commissioners. With the money thus obtained the mortgage and all other outstanding liabilities were discharged, the medical officers were repaid their contributions, and the balance was invested in the purchase of £584 8s. 9d. 3 per cent. Consols. In June, 1849, a quarterly board confirmed the acceptance of a lease for forty years from the Commissioners of Her Majesty's Woods and Forests of some premises in Westminster Mews, behind the hospital, at an annual rent of £60. The premises were converted into a Medical School at a cost of about £700, the £580 Consols being sold for the purpose, the balance being paid out of £228 13s., a fund contributed by the staff and lecturers. In the following October the Governors made themselves responsible for the rent. It unfortunately happened that after only two years' occupation, twelve months' notice was given to terminate the lease, the ground being required for the Stationery Office. In the following year (1852), therefore, school buildings were constructed on the ground at the back of the hospital at a cost of £918 10s., the amount being defrayed by the hospital. For this sum the dissecting room and chemistry laboratory were built, the present operation theatre was constructed in the place of the old one, which was converted into a lecture theatre, and the out-patient rooms were rearranged. In 1855 the Commissioners of Woods and Forests paid a compensation of £150 to the Governors for having been compelled to surrender the former premises, half of which sum was applied to arrears of rent and half towards the erection of a chemistry theatre, the balance having been paid by the medical officers. After a very disturbed existence the Medical School was at last quietly established at the back of the hospital, but the requirements of teaching kept growing. A light and commodious laboratory for teaching histology was built in 1874, and both chemistry and histology laboratories were considerably enlarged in 1878. The total cost of these alterations was defrayed by the school and staff.

In spite of every effort it had become plain that at the end of thirty years the requirements of the school had outgrown the space at its disposal. A site suitable in every respect was obtained in Caxton Street, next to the Westminster Town Hall, and five minutes' walk from the hospital, at a cost of £4600, and upon it has been built, from the plans of Mr. Salter, a substantial pile of school buildings at a cost of £9000, affording the most complete accommodation, and fitted in a manner which fulfils the most modern requirements of scientific teaching. The memorial stone of this new building was laid by his Grace the Duke of Westminster on February 28th last.

The vacation of the premises at the back of the hospital will now permit of the construction of a new out-patient department, and it will at once be proceeded with. Mr. Salter has prepared plans, which will provide a central large and lofty waiting room, capable of most complete thorough ventilation, four consulting rooms, which will be well lighted and quiet, an entrance hall with accommodation for the registration of patients, a long ample corridor extending from the entrance hall the whole length of the out-patient buildings, and terminating in a waiting room by the side of a large and well-arranged dispensary, and with an exit close by. The plans also comprise the building of a theatre for clinical lectures capable of accommodating sixty students in the place of the large theatre, which will be pulled down, and provide further, if sufficient funds come in, for the erection over the lofty waiting room of a chapel, to be approached from the centre staircase opposite the front door of the hospital. This is a most desirable improvement not only from its own importance, but on account of the fact that the vacation by the present chapel of St. John's Ward on the second floor, will afford an extra men's ward for medical patients, and thus supply a want of long standing. Other improvements rendered possible by the removal of the Medical School are the following:—The library will become the surgery of the hospital, with a door close to the main entrance; the museum, the present surgery and its appendix, will be transformed into four bedrooms and a bath room for the accommodation of two house physicians and two house

surgeons, the present rooms of the two senior officers becoming the four sitting rooms; a large dining room will be obtained for the nurses in the basement; and, lastly, a change of great importance will be the erection at the top of the hospital of large, light, and airy post-mortem rooms, approached by an external lift.

To return to the new Medical School. The accommodation provided is well shown in the accompanying plan of the various floors. To begin with the basement:—In front are the dining and smoking rooms of the Students' Club, with a kitchen between them, and cellars beneath the pavement. At the foot of the stairs are also a lavatory and other offices. A good light is secured and a height of twelve feet obtained for these rooms by raising the ground floor several steps above the level of the pavement, and by an additional excavation of a little over two feet more than has been found necessary in the other parts of the building. The less lofty part of the basement will give four rooms for the resident porter and his family, a room for the heating apparatus, a large coal and four other cellars. There is a yard also at the back between the building and the Underground Railway, with gates communicating with the street, and a lift from the basement to the top.

On the ground floor there is a fine entrance hall and a suitable room for the accommodation of the hall porter, where he can take charge of parcels and letters. On the right there is a large library, with five windows, a council room, which will be also available for Examinations, a Dean's room, two chemistry laboratories with good north light. And on the left there is a reading room for the Students' Club, the very light staircase, a cloak room, and the chemistry theatre, which is fitted for sixty students, and capable by a special arrangement of fittings of accommodating a large class for practical chemistry.

Ascending the stone staircase which is opposite to the library door, we come first to a class room which is of the same size as the Students' Club reading room immediately below it. Next to it is the large theatre. It occupies two floors and is seated for 100 students. Beneath the tiers of seats is a large and well-lighted diagram room which will

permit of the classification and easy identification of the numerous diagrams which are used in the various lectures. Besides the entrance to the theatre on this floor there are two entrances to the upper part of the seats, one from the corridor above and one from the gallery of the museum. This theatre is lighted by five windows and a large skylight.

Next to the large theatre is the very handsome museum. It also occupies two floors and is quite one of the features of the building. It is oblong in shape, 30 ft. by 25 ft., is surrounded by a gallery on the level of the floor above, and with an entrance from the upper corridor. It is lighted by a large lantern skylight. There is a spiral staircase in one corner by which also the gallery can be reached. By the side of the museum, and with a door of communication, there is a Curator's room.

Beyond this again is the large histology room. It has six windows, three close together to the north and three to the east. By the side of this is a smaller physiology room, also with a north light. The corridor, both on this floor and on the floor above are well lighted, as there are no buildings over the chemistry theatre to cut off the light. There is a lift to bring the subject from the upper floor to this floor for easy conveyance on rollers to the large theatre.

Again ascending the staircase we come to the small theatre, which is of the same size as the class room below it, but is fitted with seats for fifty students, and lighted with a skylight in addition to the ordinary windows. Next to it is the upper part of the large theatre, then the gallery and upper part of the museum, and then we come to the large and well-lighted dissecting room, 35 ft. by 22 ft. It has an asphalte floor, and the walls are lined with white tiles. Large slates are let into the walls on each side, similar to those inserted in the walls of the theatres for facility of illustration. The room is lofty and has a fireplace at each end, in addition to the other arrangements for ventilation. A lavatory, a mortuary, and a demonstrator's room are attached, and there are two lifts, one to the floor below, and the other to the level of the yard at the back of the building. There is a door of communication with the latter lift both in the chemistry and

histology laboratory, so that the lift will be available for coals and other heavy objects as well as for subjects.

The formation of a Students' Club cannot fail to be of great advantage. Most of the staff have joined it, and any student can become a member on payment of the very moderate annual subscription of half a guinea. The members will be able to obtain luncheon or dinner or afternoon tea without leaving the building, and at prices more moderate than those of ordinary public dining rooms. They will have some of the leading newspapers in the reading room, and there will be facilities for writing letters. There is a smoking room for those who desire to smoke. Departing students will be able to make themselves life members of the club by paying a small fee, so that it is possible that this social organisation may be an additional means of strengthening that *esprit de corps* which is ever a source of vigour in educational bodies.

Westminster Hospital, with its 200 beds and extensive out-patient department, and its new and commodious Medical School, affords in a complete form all the material that is required for a practical medical and surgical education. Its size is a very convenient one, and it combines the advantages of a general and a special hospital, as it has separate departments for all the specialities which may be legitimately so considered, or which require special instruction. These departments are devoted to *obstetric, dental, ophthalmic, aural, orthopædic, skin,* and *throat* diseases, in all of which it is important that the student should have opportunities of study. The Medical School is proportioned to the size of the hospital, so as to maintain all the advantages of a small school, and especially that personal supervision and guidance which every student requires, but which is very difficult, if not impossible, in a large school, and at the same time to secure for every student in rotation clerkships and dresserships both to out- and in-patients. In the more strictly school subjects also it is hardly necessary to point out the great advantage of personal supervision, aided as it is at Westminster by regular tutorial instruction, and by taking great pains with the students individually in all branches of manipulative work.

APPENDIX.

1. The case of Charles Dunlop is interesting as being the first admitted into the hospital requiring surgical treatment. The leg was condemned by the first local surgeon under whose care it came, and a consultation was held. Mr. Small prevented the amputation, by stating that he could cure the limb. The following entry testifies to his success.

"Ordered that ye following letter of thanks be sent to Mr. Small, Surgeon, in York Buildings, for his particular care in curing Charles Dunlop's Leg."

"Sir,—The extraordinary cure you have performed upon Charles Dunlop, in saving his Life and his Leg, when both were in ye greatest danger, calls for our particular thanks to God, and sincere acknowledgments to yourself for ye same, and ye Gent of this Society do unanimously return you their hearty thanks, hoping you will continue your kind assistance and good offices to this Infirmary when it is consonant with your conveniency, and they desire you to be assured that they are with great Esteem and Gratitude,

Sir, Y^r^ most hum Serv^ts^,

By order of ye Society.

THO. WISDOM."

"16th Nov., 1720."

2. The minute on the retirement of Mr. Cheselden in 1739 is as follows:—"That the thanks of the Society be given to Wm. Cheselden, Esq., for the long and voluntary assistance given to the patients of this Infirmary by many and successful operations as Lithotomist, and by readily contributing his experience and advice on all occasions as Consulting Surgeon, to the great relief of the patients as well as credit and success of the Society in general." The operating table on which Cheselden used to operate is still preserved as one of the tables in the New School.

There is also an oil painting of Mr. William Pyle and another of Mr. John Pyle in the Board Room. On the 8th of January, 1733-4, there is the following minute:—"Ordered

that Mr. William Pyle and Mr. John Price or any succeeding Surgeon or Assistant Surgeon shall not have liberty to take any cub or cubs, or receive any fee or reward for admitting any persons to the practice of the Infirmary, their apprentices excepted." This was relaxed in 1737, when three pupils or "cubs" were allowed to each surgeon, a number gradually increased until all limitation was removed.

3. The following minutes, which appear on Aug. 4th, 1803, are interesting as showing public feeling at the time:

"By virtue of the power vested in us, the Trustees of the Westminster Hospital, to adopt at General Boards such temporary Regulations as circumstances may require; and being desirous at this period (when the nation is threatened with an invasion by an implacable and powerful enemy) of giving our Support to His Majesty's Government, and to the Loyal Defenders of our Country by affording them all the aid and assistance in our power:

"Resolved unanimously, that this hospital shall (in case of actual necessity) be appropriated to the casualties and sicknesses which may happen among the Defenders of the established Government and this free Country, in preference to all other cases."

A Special Committee was nominated with power to appoint an additional house surgeon and extra nurses if necessity arose, and thanks were given to the physicians and surgeons for their offer to attend the ordinary patients at their own homes.

4. The subscription for the new hospital was commenced at a meeting held at the Thatched House Tavern in 1819 under the munificent auspices of the Duke of Northumberland, President of the Institution. The fund had increased in 1831 to more than £19,000, when the Governors, after a careful consideration and examination of other sites which had been offered to them, felt themselves justified in entering into a negotiation with the Government for the purchase of the then vacant piece of ground in the Broad Sanctuary, considering its situation to combine every local advantage that could be desired. The purchase was completed for £6,000. A

Building Committee was appointed, and from the designs of eight architects selected that of Messrs. Forward and Son, under whose superintendence the present structure was built by Mr. Barron. It is in the Tudor style, of white Suffolk brick, with stone battlements and enrichments. The frontage is about 200 feet, and the centre of the building is 72 feet in height. The original number of windows was 260 and there are 19 wards. The original cost of the building was upwards of £30,000.

List of Physicians of Westminster Hospital from its foundation, A.D. 1719 *to* 1843.

Sir John Colbatch. M.D. (1716-23).

*Alexander Stuart, M.D., F.R.S. (1719-33), Copley Medalist, Physician to the Queen of George II.

*William Wasey, M.D. Cantab. (1720-33), President R.C.P. (5 years).

Richard Holland, M.D. (1724-30).

*George Lewis Teissier, M.D. (1725-33), Physician to George II.

John Wigan M.D. (1733-9).

Charles Cotes, M.D. (1733-9). M.P. for Tamworth for a few years.

Richard Mead, M.D., Consulting Physician (1733-8), formerly physician to Queen Anne, President R.C.P.

Benjamin Hoadley, M.D. Cantab. (1736-46), son of the celebrated Bishop of Winchester, Physician to the Households of George II and the Prince of Wales, Censor and Harveian Orator, R.C.P.

Thomas Wilbraham, M.D. (1739-61).

James Hawley, M.D. (1739-50), appointed 3rd Physician.

John Barker, M.D. Oxon. (1646-8).

Gowin Knight, M.D. (1748-52).

William Coxe, M.D. (1750-57).

Robert Watson, M.D. (1752-54).

*Sir Richard Jebb, M.D., F.R.S. (1754-62), Physician to George III and the Prince of Wales.

* Migrated to St. George's.

Thomas Brooke, M.D. (1757-66).
Michael Morris, M.D. (1761-91).
James Dargent, M.D. (1762-88).
John Brickenden, M.D. (1766-75).
George Hicks, M.D. (1775-93).
George Paulet Morris, M.D. (1788-1810).
William Blackburn, M.D. (1791-94).
Sir John Macnamara Hayes, M.D. (1793-4).
Sir Alexander Crichton, M.D. (1794-1801), afterwards Physician to Alexander I of Russia, Cons. Physician (1801).
Thomas Bradley, M.D. (1794-1813).
William George Maton, M.D. (1801-9), Physician to George III and H.R.H. the Duchess of Kent.
John Ayrton Paris, M.D. (1809-13), afterwards President R.C.P., 1844-56.
Thomas Hume, M.D. (1810-13).
Alexander Peter Buchan, M.D. (1813-21).
Sir George L. Tuthill, M.D. (1813-35).
Tristram Whitter, M.D. (1813-20).
John Noble Johnson, M.D. (1820-3).
W. M. Boyton, M.D. (1821-5).
John Bright, M.D. (1823-43), four times Censor R.C.P., died 1870, æt. 87.
George Hamilton Roe, M.D. (1825-57), Cons. Physician (1870), died 1873, æt.76.
John Burne, M.D. (1835-43).
P. Nugent Kingston (1843-55), Cons. Physician (1855).
William Richard Basham, M.D. (1843-77), Cons. Physician (1877).

List of Surgeons of Westminster Hospital from its Foundation to 1843.

*Claudius Amyand, F.R.S. (1721-33), Sergeant-Surgeon to George I and II.
*Ambrose Dickens (1721-33) Sergeant-Surgeon to George I and II.
*William Cheselden, F.R.S. (1724-33), Cons. Surgeon and Lithotomist (1733-39), Surgeon to Queen Caroline (George II).

Thomas Hope, Oculist (1728-36).

William Pyle (1733-49).

John Price (1733-46).

John Pyle, Assistant Surgeon (1735), Surgeon (1746-88).

Robert Heathfield, Assistant Surgeon (1746), Surgeon (1749-55)

William Baker (1749-54).

*Thomas Gataker (1754-60).

James Wallace (1755-62).

Abraham Wharley Humphreys (1760-70).

Henry Watson, F.R.S. (1762-93), Surgeon to Middlesex Hospital.

John Obadiah Justamond (1770-86).

John Sheldon (1786-88).

William Lynn, Assistant Surgeon (1787), Surgeon (1788-1834), Cons. Surgeon (1834). Pupil of John Hunter. Spoken of as "the Nestor of the Surgical Profession; successful in a thousand capital operations, but untutored in the use of the pen, he has carved his name with a scalpel in the temple of fame." President of R.C.S. 1825.

William Richard Morel (1788-1823).

Sir Anthony Carlisle (1793-1840) President, R.C.S. 1828 and 1837. Professor of Anatomy, Royal Academy.

Anthony White, Assistant Surgeon (1806), Surgeon (1823-46), Cons. Surgeon (1846), twice President R.C.S.

George James Guthrie, Assistant Surgeon (1823), 4th Surgeon (1827-43), Cons. Surgeon (1843). Twice President R.C.S. Served as Army Surgeon throughout the Peninsular War, and wrote its surgical history, besides many valuable treatises.

James Harding, Assistant Surgeon (1827-31).

William Bewick Lynn, Assistant to Mr. Lynn (1823), Assistant Surgeon (1831), 4th Surgeon (1834-53), Cons. Surgeon (1853).

F. Hale Thomson, Assistant Surgeon (1834), Surgeon (1843-50), Cons. Surgeon (1850).

Charles Guthrie, Assistant Surgeon (1843).

Benjamin Phillips, F.R.S., Assistant Surgeon (1843), Surgeon (1846-53), Cons. Surgeon (1853).

* Migrated to St. George's.

PALLOR OF THE SKIN IN SOME OF ITS CLINICAL ASPECTS.

Being the substance of two Clinical Lectures given in the Westminster Hospital Medical School.

By Dr. FINCHAM.

The best form of clinical lecture is probably a clinical demonstration. The physician selects a patient suffering from no matter what disease, and points out to the student the symptoms actually present in his particular case. This, it may be, can often be done to the best advantage in the wards of the hospital, especially where the number of the students is small, without any formal clinical lecture at all. As a rule, however, further observations are required. It is impossible in the presence of the patient to say everything that is needed, especially in the way of diagnosis and prognosis; the demonstration, therefore, in the wards has to be supplemented by further explanations in the lecture room. This is the more common form of clinical lecture. Another form is where the lecturer takes this or that symptom of disease, as described by a patient or ascertained by examination, and explains what this symptom may mean—what disease or diseases it may indicate. I well remember, when a student,

hearing a most interesting and instructive lecture by the late Sir Benjamin Brodie the subject of which was "pain in the back." He supposed a patient complaining of this symptom, and then enumerated the various morbid conditions from which the pain might arise, *e.g.* renal calculus, spinal disease, lumbago, aneurysm of the descending aorta, and so on. He then proceeded to show how, in a particular case, the real cause could be discovered. This, then, is another form of clinical lecture, although there is no patient present whose symptoms form the subject of a demonstration, and upon which comments may be made; the starting-point, however, is the individual; he is supposed to be present, and so the lecture may be fairly regarded as clinical; the beginning is the bedside.

It is proposed in the following observations to follow the second form of clinical lecture, viz. to take a symptom and call attention to the various diseases with which it may be associated. It is, moreover, a common symptom, one you will constantly meet with in practice, and for this reason especially worthy of your consideration. The symptom is pallor of the skin, indicating that condition of the blood known more or less correctly under the various names of anæmia, oligocythæmia, oligochromæmia, or again of leucocythæmia in those cases where the development of the red corpuscles is notably interfered with, and the number of the white corpuscles is largely in excess.

Of pallor of the skin, therefore, as a clinical symptom, I propose to speak. A patient is brought to you, and you at once observe that the face is very pale. You must not, however, at once infer that this is due to want of red blood, and is therefore an indication of disease, for the obvious reason that some persons are naturally pale, with complexions sometimes of an ivory tint, and yet they are perfectly healthy. A little further examination, however, will soon show whether the pallor of the skin is due to anæmia or not. You look at the whites of the eyes and, if the red elements of the blood are deficient, you will find them not only whiter than natural but of a faint bluish tint which may be regarded as almost characteristic of this condition. You further examine the mucous membrane of the lips, cheeks, gums, and tongue,

and you will find them not red and ruddy as in health, but pale and "bloodless." Indeed, as regards the tongue the whole organ participates in the general pallor, and more resembles the colour of veal, from which, you know, the blood is abstracted before the animal is killed. Again, if you look at the hands of the patient you will observe the same want of healthy blood. It is not only over pale but the veins appear as mere streaks, with the contrast between their colour and that of the skin far less marked than in health. Other symptoms will also be present. The patient generally complains of palpitation and breathlessness, especially on ascending stairs, of occasional faintness, and often of throbbing headache. It is in these cases that a soft systolic murmur is so often audible at the base of the heart, and that you may hear in the veins those sounds of a droning, humming character which the French call *bruit de diable,* and which may be produced by pressing lightly with the stethoscope on the side of the neck. Perhaps there is no case in which you will find the symptom of bloodlessness more marked than in women who have lost large quantities of blood at or after delivery; you would do well, therefore, if such a case fall under your notice, to observe carefully all the symptoms present.

We will now suppose that you are consulted by a patient in whom pallor of the skin and mucous membranes is more or less a prominent symptom. How are you to proceed? Ascertain in the first place whether any actual hæmorrhage has taken place; in the case of a woman, whether there has been any considerable discharge of blood from the uterus, whether catamenial or otherwise; in the case of either sex, whether there has been any hæmaturia, hæmatemesis, or passage of blood from the rectum. In many such cases doubtless the patient is aware that much blood has been lost, and will give all the requisite information; but it is not so always. Thus a gentleman, aged thirty, consulted me with symptoms of anæmia of the most marked kind. His skin and mucous membranes were blanched, his heart palpitating, his pulse small, rapid, and weak. When questioned about loss of blood, especially from the rectum, he told me that, after his bowels acted, he thought he had observed the

paper slightly stained. He was found to be passing blood in large quantities in effect of internal hæmorrhoids. In the following case the patient was aware that he was passing blood by stool, but the actual source of the hæmorrhage had been overlooked. A middle-aged man of intemperate habits was admitted into the hospital with all the usual symptoms of anæmia of which pallor of the skin and mucous membranes was the most prominent. The hæmorrhage, of which he was conscious, had, we understood, been attributed to an obstructed portal circulation, and this to alcoholic excess; but the bleeding was too constant to be thus accounted for, and he moreover complained of some local uneasiness when the bowels were moved. A surgical examination discovered a small bright red velvety patch of mucous membrane just above the sphincter which bled on the slightest touch. The application of nitric acid soon effected a cure, and the bleeding ceased. Another gentleman, aged forty-five, was sent to me supposed to be suffering from disease of the heart. He was languid, short breathed, complained of palpitation and occasional giddiness, and was generally out of condition. I could find no evidence of heart mischief, so that the symptoms could not be attributable to this. I observed, however, that he was unusually pallid, and on inquiring further about the possible loss of blood, I found that he did, he thought, lose a little when his bowels were moved. He was examined by a surgeon, and just above the sphincter ani was discovered the gaping mouth of a very small artery, which, when the bowel was distended by the act of defæcation, allowed of the escape of blood. Surgical help soon put this to rights, and the pallor, palpitation, and giddiness soon left him.

Such cases as these, where blood escapes from the rectum and so induces anæmia with all its concomitant symptoms, are by no means uncommon, and you must be quite prepared to meet them. They may occur in both sexes, and, as a rule, unless malignant growths are present, local treatment will effect a cure.

Analogous cases will occur in connection with uterine hæmorrhage. A single lady, aged forty-four, consulted me because she said she was "unwell too much," and certainly the pallor

of the skin and lips told the tale clearly enough that anæmia was present. She imagined that the "change of life" was occurring, and, as a matter of fact, when the cessation of the catamenia is impending the flow for a time is sometimes considerably increased. Hence it is that women, at their critical period, if they suffer from uterine hæmorrhage, constantly think that it is only what is to be expected and therefore not likely to indicate any serious disease. In the case alluded to, I directed a vaginal examination to be made with the result of finding a polypus about the size of a man's thumb which had passed through the os uteri and produced the hæmorrhage. It was removed and the bleeding notably diminished, occurring only every month for three or four times and then gradually stopping altogether.

Uterine cancer may also first manifest itself by the presence of uterine hæmorrhage and resulting anæmia, as shown by pallor, palpitation, breathlessness, and the rest, there being little or no local pain. The patient tells you she is unwell too much and thinks that that explains everything; for here, again, the age of the patient who is suffering from uterine cancer is often that at which the catamenia may become irregular and profuse previous to stopping altogether. She imagines, therefore, that she is only suffering from some of the discomforts incident to the so-called "change of life." In such cases an examination may discover cancerous disease considerably advanced.

To consider another source of hæmorrhage and so of anæmia, viz. some portion of the urinary tract. As you know, blood in the urine is a very common symptom of gravel and calculus, but the amount of blood lost from this cause is not necessarily very great and moreover the flow is not constant. Sometimes, however, it is both profuse and scarcely ever absent, so that the anæmia is of the most marked character. Under these circumstances the hæmaturia is generally due to some fungoid growth either in the bladder or the kidney, and the possibility of this must be recognised when you have to deal with a patient presenting the symptoms of loss of blood in an aggravated form.

Thus far we have considered anæmic pallor as the result of an escape of blood externally; it may, however, occa-

sionally be the only indication of some internal hæmorrhage. A gentleman, æt. 78, having previously complained of nothing except of a little abdominal uneasiness attributed to flatulent dyspepsia, had a sharp attack of diarrhœa. He retired to bed immediately after, at his usual time, and was heard soon after he entered his room to fall heavily. He was found lying on the floor unconscious and pulseless, and so continued for about an hour. He was got to bed, slept fairly well, and the next morning spoke only of "weakness" and of a slight aggravation of the old abdominal discomfort. It was observed, however, that there was a marked change in the colour of the skin; the hands and face were far more pallid than usual and the conjunctivæ were of a bluish tint. As regards the cause of the attack, one conjecture was that blood had been poured from an ulcer probably in the upper part of the small intestines; before, however, any accurate diagnosis had been made the patient again fainted and died immediately, about twelve hours after the original attack of the night before. A post-mortem examination revealed an aneurysm of the abdominal aorta, as large as a moderately sized orange. This had burst behind the peritoneum and allowed of two escapes of blood.

So much for anæmic pallor as a symptom of actual loss of blood, whether externally or internally; it may arise, however, although usually in a less intense degree, from many other causes, which have to be borne in mind when you are consulted by a patient in whom this pallor is present. A man applies to the hospital complaining of general weakness and, it may be, of irregular muscular pains; he is observed, moreover, to be markedly pallid. From what is this patient suffering? Very likely from chronic lead poisoning. You may find that he is a house-painter or has worked in a white-lead factory, and you further ascertain that there is a blue line at the edge of the gums due to a deposit of sulphuret of lead at the point where they come in contact with the teeth. You may further find that he has had other symptoms of lead poisoning, colic, dropped wrist, and possibly epileptiform convulsions; these last, however, need not be present to convince you that the presence of lead in the system has caused the anæmia. Pallor of the

skin and irregular muscular pains, with the addition of the blue line along the gums, are sufficient indications. As to the treatment, it is, of course, that required for the lead poisoning.

Again, a child or young person is brought to you with marked anæmic pallor; you may further observe slight œdema of the lower eyelids and it may be of the ankles, and the patient is generally feeble and out of condition. What may these symptoms indicate? Probably albuminuria due to scarlatina or to exposure to cold and wet, the acute stage of the malady having been possibly unrecognised. Pallor of the skin, moreover, is not unfrequently one of the first recognised symptoms in chronic interstitial nephritis. It is often observed by the friends of the patient before the other symptoms manifest themselves.

In the cases of anæmia to which attention has been hitherto called the primary cause has been pretty evident. In some a large quantity of blood has been directly lost, and it would seem that after such loss it takes a considerable time, even in favorable cases, for the blood to recover its natural condition, especially as regards its red elements. Other constituents are regained with greater rapidity, not so the hæmatin and red corpuscles. Hence, after large losses of blood, some time must elapse before the ruddy tint of health reappears. The cause of the anæmic pallor here is doubtless loss of blood, pure and simple. In Bright's disease, acute and chronic, although the chain of causation is doubtless obscure, there is reason to believe that, on the one hand, in consequence of the waste caused by the escape of albumen in the urine, and, on the other, owing to the defective excretion of urea, there is a grave interference with the formation of healthy blood. In the same way it is supposed that lead and other metals, *e.g.* copper, act when gradually absorbed into the system.

To all these cases, then, of anæmic pallor a tolerably distinct cause may be assigned, it is not so, however, always. Cases are frequent enough in which it is extremely difficult to say what is the starting point of the malady. A girl is brought to you, aged say from fifteen to twenty-five, with marked pallor of the skin and mucous membranes. You are

told that she is losing health and strength, that she gets easily tired with a short walk, that she is breathless on slight exertion, has frequent palpitation of the heart, has lost her appetite for solid food, especially for meat, and is generally far more fanciful about what she eats than previously. She has also, it may be, some direct symptoms of indigestion, uneasiness or even pain after meals, flatulence, and occasional vomiting. She may also have become altered in character, is listless, and takes little or no interest in her old pursuits. As regards the catamenial function you are told that this is not as it used to be. The discharge may have ceased suddenly, more often, however, you find that the catamenia although regular have been for some months getting less and less in quantity and decidedly paler in colour, and it may be that the discharge has gradually stopped altogether. Leucorrhœa is generally present. In these cases all the external signs of anæmia are present in a marked degree. The skin is of a pale waxy tint, the pallor sometimes varied by a pinkish flush; the mucous membranes are white, and the conjunctivæ have the characteristic bluish colour. Such cases are common enough under the name of chlorosis, and usually occur when the patient has been exposed to conditions likely to deteriorate the general health. Thus, a girl may have been shut up over much in close unventilated workrooms, with little or no outdoor exercise, or she may have been working in her own poor lodgings, living mainly on tea and bread. Or, again, among the richer classes, a girl may be kept too long at her lessons and thus deprived of a due amount of fresh air and sunlight, the result being that she loses her appetite for wholesome food and drifts into a wretched kind of diet almost as innutritious as that of a half starved seamstress. Girls sometimes, also, by a sort of whim, get into the habit of taking but little food, especially solid meat. They think it looks interesting and refined to be satisfied with a scanty diet, and in this way all the symptoms of chlorosis gradually manifest themselves. The nervous system may also play a part in the causation of this form of anæmia. Indeed Trousseau classes it among the neuroses, so important does he consider the nervous element in the production of the malady. There is certainly good reason to

think that emotional excitement of some kind may be the starting point.

As regards the treatment of this form of anæmia it is certainly satisfactory. In the great majority of cases the patient recovers, and the recovery is due to the treatment. She is *cured* and not merely gets well.

When you have to treat a patient of this kind you must first insist upon everything likely to deteriorate the general health being got rid of. In the first place there must be no more living in hot unventilated rooms, no more overwork of mind or body; some light occupation, however, for both should be insisted upon, for complete idleness will not help on recovery. As regards exercise, great care must be taken in this respect. It must be carefully borne in mind that muscular power, including that of the heart, is extremely feeble, and therefore no long walks or active games should be permitted. The patient should, however, be urged to be in the air as much as possible, and when circumstances allow, drives in an open carriage should be insisted upon. She should also be directed to rest for some portions of the day upon the sofa. This rest is of great importance, and it is one of the reasons why chlorotic girls do as a rule so much better as in-patients as compared with out. The diet requires to be most carefully regulated. Food is of course essential, but, as the digestion in these cases is extremely weak, anything like large heavy meals is out of the question. Nothing can be worse than to feed a chlorotic girl at once on full meat meals and porter. The stomach is unequal to the task of digesting them; there is increased pain after food, and the patient continues ill nourished. At first a small quantity of light nutrititious food should be given every three hours. Bread and milk, beef tea with vermicelli, cocoa and bread and butter, a lightly boiled egg, are suitable articles of diet, and for these can be gradually substituted white fish, chicken, game, and eventually ordinary diet. By adopting some such plan as this you will find that the dyspeptic symptoms, which are so constant, will gradually disappear, and the patient become able to live like ordinary people. As to the use of alcohol in any form it need not be as a rule insisted upon; experience, however, has shown that

a small glass of Burgundy taken at meals once or twice a day is by no means to be regarded with disfavour.

Whilst the greatest stress should be thus laid upon the necessity of a careful diet and of all proper hygienic surroundings it would be a very grave error to suppose that medicine is unnecessary in chlorosis. So far from this being the case it may be truly said that there is no disease in which the effect of medicine for good is more absolutely certain than in that under consideration. This medicine is iron; before, however, administering it you would do well to give your patient a light bitter tonic to help digestion. This may consist of ten grains of carbonate of soda, with ten minims of tincture of nux vomica, given in an ounce of infusion of calumba half an hour before the two principal meals; the bowels, if necessary, being kept open by eight grains of the aloes and myrrh pill given twice or three times a week. The bitter medicine should be continued for a week or ten days and then a course of iron begun. As to the preparation to be employed there is perhaps none better than the mistura ferri composita of the pharmacopœia, which contains the metal in the form of a carbonate. It is not, however, always the case that this mixture agrees; it sometimes produces sickness and moreover it is somewhat nauseous. Where this is the case you cannot do better than to employ the ammonio-citrate of iron or the tartarated, in doses of seven grains, given twice a day immediately after meals. It will of course depend upon the progress of the case how long it will be necessary to continue the iron. As a rule it is well to go on taking it twice a day for a month or six weeks, and subsequently once a day for a similar period, and you will seldom be disappointed in the results. Iron, then, is the great remedy in chlorosis and should always be given; there is reason, however, to think that the combination of a small quantity of arsenic will hasten the cure. Three minims of the liquor arsenicalis should be added to each dose of the iron, its effects of course being carefully watched. Great advantage may also be gained by change of air if the patient is living in a large town, or, again, in a moist relaxing climate. There can be no doubt that recovery is much more rapid if, under these circumstances,

the patient is removed to the seaside, or better still, to a dry breezy upland. Fresh air and plenty of sunlight are very old but very potent helps towards the restoration of health and strength. You may then, in the immense majority of cases of chlorosis, expect recovery under the treatment pointed out. There is, however, one source of anxiety which you must not forget, and that is, the possibility of a chlorotic girl suffering from simple ulcer of the stomach. I have already stated that symptoms of indigestion are by no means uncommon in such cases; there is often pain after eating, vomiting and the rest, and a gastric ulcer may be present. Such being the case the dyspeptic symptoms must be carefully watched and all precautions taken, in the way of diet and otherwise, to meet the possibility of so grave a complication.

This chlorotic anæmia occurring as a rule in young women is doubtless the condition of which pallor of the skin and mucous membranes is the most frequent clinical indication. There is, however, another form of anæmia to which the name of "pernicious" or "progressive" has been given, and which is far less amenable to treatment than the variety just considered. It is in fact, in the vast majority of cases, incurable. As regards the nature of this form of anæmia some observers regard it as quite distinct from the ordinary anæmia of chlorosis, but it may be well doubted whether the difference is essential. It seems to be more one of degree than of kind. But, however this may be, there is no doubt that fatal cases occur in which, at first, the anæmic pallor is not distinguishable from that of the less severe form of the disease, and which is accompanied by all the ordinary symptoms of chlorosis, palpitation, shortness of breath, dyspepsia, vomiting, and others to which attention has been already directed. It may be that for some time the practitioner thinks that he has to do with a common case of anæmia, but he soon finds that his remedies have no power, that the original symptoms intensify and others supervene—it may be diarrhæa, sleeplessness, or possibly stupor. Hæmorrhages moreover, not unfrequently take place from the nose, uterus, &c., and petechial spots may appear on the skin and mucous membranes. There is also marked change in the appearance

of the blood. If you prick the finger of such patients a thin, pinkish-white fluid exudes very unlike the bright scarlet of healthy blood. Then under the microscope great changes are observable in the red corpuscles. In the first place they do not collect together in rouleaux as in health, but lie separately or form masses of irregular shape; they are also much diminished in number, vary much in size, some being larger, some smaller than natural. They exhibit, moreover, great diversity of form, some being oval, some spindle shaped, some with tail-like projections, with granular matter scattered between them. Thus the red corpuscles are diminished in numbers, and irregular both in size and shape. You must not, however, give at once an unfavorable prognosis if you find the blood of an anæmic subject exhibiting the phenomena just mentioned. I am quite sure that they may be present and yet the patient gets well. Thus, in the case of a married lady, aged forty, whom I saw a short time since suffering from profound anæmia, due apparently to great mental anxiety, the condition of the blood was exactly as I have described, and yet recovery took place under the use of iron and arsenic. In the immense majority of cases, however, in which this condition of the blood is found combined with the other symptoms of pernicious anæmia, any hope of recovery cannot be entertained. The patient goes on from bad to worse, the nutrition of the body becomes more and more impaired, fatty degeneration takes place in the muscular and other tissues, the heart especially suffering, and the patient dies as a rule of pure asthenia.

As to the persons most likely to suffer from this disease, on the whole more women suffer than men, but neither sex is exempt. In the case of men it is more common between the ages of forty and sixty; in women it occurs usually under forty. As to the starting-point of this pernicious anæmia nothing has been made out except that the same general causes which appear to be at work in the production of the simpler and more curable form will also produce the graver one. Thus bad living and unhealthy surroundings, nervous shocks, long-continued grief and anxiety, have preceded the attack. Again, the direct loss of blood, and in women the condition of pregnancy, especially when they have had many

children rapidly, would seem to have played an important part in developing the malady. Its duration is uncertain, life being prolonged after the appearance of the first symptoms, it may be for a few weeks or months, or sometimes even two or three years.

From what has been said, much unfortunately cannot be expected from treatment in the great majority of cases; inasmuch, however, as recovery has occasionally taken place where all the symptoms present have pointed to pernicious anæmia, everything must be done that can possibly help to a favorable issue. In the first place, all that conduces to the improvement of the general health must be insisted upon, and the same plan pursued as directed in the simpler form of the disease. As to the use of drugs arsenic should be invariably given in combination with iron, and continued in small doses for a considerable period of time.

Up to this point we have considered anæmia either as the direct effect of loss of blood or what may be called its idiopathic form, *i. e.* as a disease in which no special organ appears to be affected. We come now to a variety in which this anæmic condition does seem mixed up with a definite organic change in the shape of enlargement of the spleen. When, therefore, a patient consults you with symptoms of anæmia, no matter whether these be marked or slight, it is always well to examine the spleen and ascertain what is its condition. At the same time, when you go into the history of the case, you will make special inquiries as to where the patient has previously lived; whether he has at any time been in India, East or West, the Levant, in fact in any district, even in temperate climates, where intermittent fevers are rife. This is all important, for hypertrophy of the spleen, which we are now considering as a possible cause of anæmia, is one of the commonest sequels of long exposure to malaria. Of this there can be no doubt. A prolonged stay in a malarious district, whether the patient suffer from actual paroxysms of intermittent fever or not, will, in consequence of the splenic affection induced, reduce the proportion of the red corpuscles. What is the exact relation of the spleen to the blood-corpuscles, both white and red, is too large a subject to be discussed in a clinical lecture, but that there is an in-

timate connection between the normal condition of the blood and the healthy action of the spleen appears certain. It would seem equally certain that the poison of malaria is a potent agent in altering its structure and deranging its functions. I have said that, in the case of persons living in a malarious district, the spleen may be affected, although they may have had no actual ague fits. This holds good especially with children. In the majority of instances, however, both young and old have had repeated attacks of fever before the abdominal organs suffer. In cases, therefore, of anæmic pallor, if you find the spleen enlarged, it may be to an enormous extent, and if the patient have been living in an aguish district, you may reasonably infer that the symptoms are the direct outcome of malarious influences. It would seem that, under such circumstances, the enlargement of the spleen sometimes takes place with extreme rapidity, its tissue becoming soft and easily torn. Such cases, however, are by no means necessarily fatal. If the patient be put under proper treatment, and especially if he be removed to a more favorable climate, the organ may, and very often does, recover its usual size and the health generally may be re-established. Not so, however, always. The spleen remains large, its condition being that of hypertrophy proper, in which all the elements which make up the gland are increased in the same proportion. Under these circumstances the enlargement is sometimes enormous, the spleen filling the left half of the abdomen and weighing eight, ten, twelve, or even twenty pounds. The general health suffers *pari passu*; the skin becomes of a dirty white colour, and there are frequent hæmorrhages in the shape of petechial spots and discharges of blood from the various mucous surfaces. Dropsy, especially of the abdomen, is also often present, and the patient gradually dies of exhaustion. In such cases as these the prognosis is most unfavorable; still something must be attempted in the way of treatment, and the medicines most appropriate are certainly quinine, iron, and arsenic. Much stress, too, is laid by Indian practitioners, both English and native, on the use of the red iodide of mercury ointment. This should be well rubbed in over the situation of the enlarged spleen, and very satisfactory results have, it is said, followed

the practice. The patient, if living in a malarious district, should of course be removed to a more healthy climate.

Anæmic pallor, then, may be due to a malarious cachexy in which the enlarged condition of the spleen plays a prominent part. There is, however, another form of splenic disease in which this same pallor may be a very early symptom, viz. splenic leucocythæmia. A patient tells us that his health has been failing for some time, and you find that he has all the symptoms of anæmia, pallor, palpitation, faintness, short breath, and general want of strength. Subsequently he may have diarrhœa, hæmorrhages from mucous surfaces, and, as the disease advances, distinct paroxysmal attacks of fever. In such cases the abdomen will be found greatly enlarged, this enlargement being due to a great increase in the size of the spleen in which an enormous amount of adenoid growth has taken place. The result of this morbid development of the gland tissue is that an undue quantity of white corpuscles are generated and poured into the circulation. These corpuscles are either unfit to be converted into red or the machinery by which this conversion takes place is unequal to the work put upon it, anyhow the change of white into red corpuscles does not take place in anything like the normal proportion, so that when a drop of blood is examined under the microscope the white cells will be found increased to such an extent as to be as numerous or even more numerous than the red. You must, then, when a patient in whom anæmic pallor is a prominent symptom is brought before you, not forget that he may be suffering from splenic leucocythæmia. As to the treatment of such cases it is well to administer iron and arsenic, unfortunately, however, not much success has followed the use of any drugs. The diet should be light and nutritious.

I have now called your attention to most of the morbid conditions of which pallor of the skin may be an important indication. One, however, remains, viz. Addison's disease. Here the anæmia is of the most marked kind, and is accompanied by all the usual indications of that condition, palpitation, faintness, shortness of breath, and the rest. Of the other symptoms of Addison's disease, especially of the bronzing of the skin, it is not necessary now to speak.

ON THE EMPLOYMENT

OF THE

HYPOPHOSPHITE OF SODA

IN THE TREATMENT OF

"TUBERCULAR" INFLAMMATION IN CHILDREN.

By Dr. STURGES.

In common with many other physicians I had been in the habit of prescribing the hypophosphites in acute phthisis, but after a lengthened trial with no apparent benefit I have of late abandoned that treatment, satisfied that the best to be said for it is that it is harmless, and unwilling to continue any method of medication for mere form's sake or on the ground that there is nothing better to put in its place. A quite recent experience, however, first at the Hospital for Sick Children, and afterwards in our own wards, has led me to believe that there may be a use in the hypophosphite of soda which I have hitherto overlooked, and it is with a view to obtaining further information at the hands of independent observers that I now write.

This new trial of the drug in question happened in the first instance almost by accident. A boy, aged two years and one month, was admitted into the Hospital for Sick Children under my care with symptoms of meningitis.*

* The cases here narrated are abridged from the reports of Dr. Chaffey and Dr. Syers, the Medical Registrars at the Hospital for Sick Children and the Westminster Hospital respectively, to whom my thanks are due for ready help.

These gradually developing, the child wasted rapidly, had constant sickness, the head became retracted, legs drawn up and rigidly fixed, and it lay half conscious and regardless, except that any disturbance of its position, or a slight touch, would elicit a sharp cry. Its night temperature during the first week was 104°; the variation within twenty-four hours, observed by means of an hourly record, was close upon 9° for four successive days (95°—104°). The pulse was 130, irregular. The second week, with a somewhat lowered temperature, the same rigid attitude was maintained; vomiting was frequent, and would happen when the child was moved. In the third week the temperature became subnormal, the pulse fell to 64, was irregular and very variable; vomiting was more frequent and the bowels loose. For three weeks the child remained in the condition described, without spontaneous movement, with retracted head and abdomen, legs drawn up, vomiting from time to time, and, more notable than all, emaciated to the last degree. The condition was, in fact, that which is characteristic of those dying slowly of meningitis, and death seemed inevitable. It may be mentioned, however, that there was never squint or marked paralysis. The margins of optic discs were obscured, but optic neuritis was not well marked (Mr. Gunn's examination).

It was when in this apparently hopeless state a month after admission that it occurred to me—not from any real hope, but in the desire "to do something," which everyone has felt in these lingering cases—to give the child hypophosphite of soda. I had never before prescribed it for so young a child, and commenced with six grains, shortly increased to ten. This larger dose was on the 4th February, when the child's weight was 15 lb. (a loss of 3 lb. 8 oz. in four weeks), and, whether by coincidence or otherwise, the vomiting, which for the past fortnight had occurred almost daily and sometimes many times a day, at once and finally ceased; four days later the child was able to sit up in bed; soon the muscular contraction relaxed, including the rigid spasm, by means of which the head had been so long fixed. On the forty-second day from admission, and during five of treatment with the larger dose, the child had gained a quarter of

a pound in weight. From this time a steady improvement set in (remarkable during its first ten days for a singularly fixed and uniform subnormal temperature) with rapid recovery of flesh, and eventually the patient left the hospital well, having gained 7½ lb. in weight during a convalescence of nine weeks.

I know that this case may be matched by some others that have recovered after similar symptoms quite apart from drugs. Yet here we had in marked degree "the most reliable indications of meningitis, retracted head, fever, causeless vomiting, irregularity of pulse, muscular rigidity,"* and, if it be added, what was really the most striking symptom of all, namely, the extreme emaciation, it will be admitted that the fact of recovery was sufficiently remarkable. Remarkable enough, at all events, for this, not to warrant any precise assertions as to the efficacy of hypophosphite of soda, but to suggest that whatever circumstances of treatment could be formulated of a case which had had so happy and unexpected a termination should be adopted again upon similar occasions.

Arguing thus, it was with much pleasure that, during the convalescence of the child just mentioned, I found admitted into our Queen Adelaide Ward a patient who had just such symptoms as I was in search of—those, namely, of chronic peritonitis apparently of "tubercular" kind. The following is an abstract from notes by Dr. Syers:

"Alice L—, æt. 15, sent up from Kingston-on-Thames, March 9th, 1885. Of healthy parentage, but with history of phthisis on both sides. She is said to have been ill nine weeks, the first complaint being of pain in the abdomen, not constant, and not aggravated by movement. About a fortnight from the first onset of pain the abdomen became distended, pain increased, appetite failed, and the girl began to lose flesh. For more than a month before admission to hospital she had been under medical treatment, and for the latter part of that time, owing to extreme muscular weakness, confined to bed. For the last month, as was stated, the bowels had been moved from nine to twelve times daily,

* See Dr. Goodhart, 'Diseases of Children,' p. 395, whose words are here quoted.

and there had been much wasting." Of the condition on admission it was written :—

"The girl has the characteristic 'tubercular' aspect: delicate skin, long eyelashes, and cheek flush. There is an expression of languor corresponding with her own complaint that she 'feels very weak.' She is fairly well nourished. The skin is hot (night temp. 101°), pulse 100, and tongue furred. The abdomen is distended and tympanitic and gives the fluctuation and altering dulness with position indicative of fluid. Circumference at umbilicus twenty-nine inches. Urine, sp. gr. 1018, contains phosphates."

The general progress of the case may be noted as follows: There was nightly perspiration, not profuse but chiefly marked about face and neck; pulse was various, 112 to 120, and night temperature at or about 101°, morning 99°. The motions were now natural and regular. The abdomen continued distended, but the fluid gradually disappeared. The girl took liquid food fairly well, but she gained no strength, and the general prostration, together with night sweating, pyrexia, and abdominal distension, were now the main symptoms to attract attention.

On March 19th, that is when the course of the symptoms had been watched for ten days, the pulse being 120, night temperature 101·2°, and the patient unable to leave bed, twenty grains of hypophosphite of soda were given with a grain and a half of quinine and phosphoric acid to be taken thrice daily. The following night the temperature was below 100°, being the lowest registered since admission.

The first note of general improvement was March 25th (six days later), when the patient expressed herself as feeling stronger, and the abdomen was less distended, temperature 99·8°. The night sweating had also almost disappeared.

On April 13th, the note is, "Since last report the condition has gradually improved. The evening rise of temperature has been for the last ten days hardly above the normal; aspect is brighter, and the girl expressed desire to sit up, having previously shown no disposition to leave the recumbent position. She had in the earlier part of the illness visibly lost flesh, but owing to her weakness it was deemed unadvisable to take her weight until April 15th, when it was found to be

6 st. 2 lb. 4 oz. A week later she had gained nearly two pounds. In short, up to June 21st, when her weight had increased to 7 st. 4 lb., there was continuous improvement; the patient was up and about, temperature tending to subnormal, yet still there was abdominal flatus distension. The hypophosphite was now discontinued, but owing to a return of night sweating and rise of temperature it had to be resumed. The girl was kept in bed for a few days and lost weight. At the time of writing she is again convalescent; weight is 6 st. 13 lb. 8 oz., and she is fairly well and strong, but the abdominal distension persists, there is a tendency to night sweats, and although recovered for the present, the final issue cannot be regarded with confidence.*

In a third case, that of a child, Roland H—, æt. 7, admitted to the Hospital for Sick Children, with symptoms of peritonitis; it was again only after the failure of any spontaneous effort of recovery that the hypophosphite was given, and again it was apparently curative. The patient in this instance was a delicate rickety boy, who, however, had been fairly well up to four months and a half before admission when he began to cough. He had had measles at the age of five and inflammation of the lungs. There was no phthisis known of in his family, but no distinct history could be obtained from the orphanage whence he came. There had been no illness in the house.

* To like purpose might be quoted the following from the Hospital for Sick Children, which occurred too late for insertion in detail:—John A—, æt. 9, a pale, thin-visaged child, admitted May 14. For two months he has complained of abdominal pain, wanted appetite, and had frequent vomiting after food. He has wasted rapidly during the same time, and for the last few days had some diarrhœa. On admission, abdomen is distended and contains some fluid. There is no enlargement of liver or spleen, and no shaped bodies are to be felt. Temperature is 99·6°, pulse 100, and weight 2 st. 13¼ lb. The patient continued in a very changeless, unsatisfactory state, without strength or appetite. On the 20th June (thirty-five days from admission), when the weight had fallen to 2 st. 11½ lb., the abdominal circumference being 25 inches, and still containing a little fluid, ten grains of hypophosphite were ordered to be taken thrice daily. A week later the abdominal measurement had decreased 2½ inches. It continued to decrease during the first weeks of July, signs of fluid disappeared, and the parietes became soft and yielding. With this the boy's general condition improved, and the pinched face plumped out. He is now (July 15) convalescent, and has gained nearly two pounds in weight in about three weeks.

On admission, he had a flushed face and wearied expression with pulse of 132, and temperature 104·8°, dry tongue and tympanitic abdomen; his condition nearly resembled enteric fever. There were no distinct spots, however, nor enlargement of spleen, nor characteristic typhoid stools; the temperature chart, moreover, unlike that of typhoid, approached the normal line on most mornings; neither after the first week or so was his aspect or manner that of enteric fever. The symptoms persisting, and especially the tympanitic distension of abdomen, with some tenderness on pressure, dry tongue, sweating, and night pyrexia (100°—99°), and thirty-seven days having now elapsed from his admission, the boy was given, on March 21st, fifteen grains of hypophosphite of soda thrice daily. On the 28th the temperature was normal, "abdomen less distended and softer, moving with respiration." From this time his amendment was continuous; he rapidly regained flesh and strength and was sent to the Convalescent Home at Highgate.

In this instance, as in so many others, there was at first the puzzling resemblance to typhoid fever to contend with, but for the reasons just given, as well as from the aggravation of the abdominal symptoms long after the period of enteric fever must have been overpassed, the action of the bowels meanwhile being extremely sluggish, that hypothesis was confidently put aside. Nevertheless the bare possibility which some readers may entertain that this was indeed an example of masked typhoid takes something from the value of the case for the present purpose.

The next and fourth trial was in a case of broncho-pneumonia, in the same ward as the foregoing, which after lengthened endurance, exhibited wasting and night sweating, and, more threatening still, daily vomiting. The patient, Alice W—, between six and seven, had never recovered strength from an attack of measles fourteen months before admission, and during that while she had suffered diarrhœa with slimy and bloody motions, for which she had been an out-patient. She was ill-nourished and anæmic and had some lateral curvature of the spine. The physical signs were those of general bronchitis reaching to the medium-sized tubes, the night temperature varied between 100° and 101°,

and a fortnight after admission the child began to have daily vomiting, sometimes twice or thrice. She wasted and was in precisely that condition which so often precedes or announces the development of tuberculosis.

On the twenty-fourth day from admission and the twelfth from the commencement of the vomiting, the child was given ten grains of hypophosphite of soda twice daily. There was immediate and lasting amendment. She was sick but once afterwards; the temperature, which had been very variable, fell at once to the normal, and twelve days later she was found to have gained a pound in weight. The girl left the hospital, after six weeks' residence, well, and is, as regards the prompt and decisive amelioration which followed the drug, perhaps the most striking case in the list.

Somewhat similar to the foregoing, but less pertinent because the symptoms had been of shorter duration and there was no marked vomiting, was the fifth case, that of Ada E—, a thin, rickety child of two years and three months, who had been losing flesh and strength dating from an attack of measles. On admission at Great Ormond Street, this child had the physical signs of extensive broncho-pneumonia, respirations were 60, and there was a bluish tinge over the face which was yet more marked in the ears and finger-tips. These signs persisting without amendment through a fortnight, ten grains of the hypophosphite of soda were given on the 18th March. The registrar's note of the 20th is: "Child is sitting up and seems much better, although the physical signs of consolidation are still present; night temperature had fallen from 101° to 100°. On the 25th the temperature became normal. On April 1st the lung consolidation had disappeared, and after a lingering convalescence of about a month, yet with continuous improvement, the child was discharged well.

In the foregoing examples the hypophosphite was prescribed during the presence, as was believed, of an inflammation of the "tubercular" kind. I will now quote one where, with no local inflammation discoverable, there was yet pyrexia and progressive wasting of such degree and long endurance as to justify suspicion that the child was making for tubercle. Such cases, it need not be said, must be

selected with great care. Amongst hospital patients especially we are exposed to numerous sources of fallacy in attributing the result obtained to any particular cause. For we have to estimate the separate benefit of careful diet and regimen and cod-liver oil, and the effect of removal from unhealthy dwellings. Such considerations apply with special force to children. And it has to be remembered, moreover, that, from day to day, in the course of natural development, these small patients are altering in constitution and getting a firmer or a feebler hold of life, so that of all subjects they are the most difficult to study from a therapeutical point of view. I lay stress on the following case because, in addition to the serious and pronounced general symptoms, there were indications also of abdominal and nervous disturbance, and because the child, coming from the country and a good home, gave less room for fallacy in estimating the results of treatment than most of our London patients.

Isabella McM—, æt. 6, was admitted (the sixth case of the series) to Hallett Ward, May 6th, 1884. She was the last of six children, one of whom had died of "water on the brain" at two years and eight months. The rest were living and healthy. There was no history of phthisis on the side of either parent. Two years ago the child had measles, never whooping-cough or other child's disease; until the present illness she has been accounted healthy. Moreover, she has been living in the country, well cared for and sensibly fed.

The present illness commenced eleven weeks ago with loss of appetite and colour merely. Five weeks before admission there was added pain with distinct tenderness of the abdomen and the bowels became inactive, but no abdominal enlargement was noticed. For these symptoms the child had been sent into the country about a fortnight before admission, when she complained of headache and of the noise around her and was unwilling to be touched or in any way disturbed. The bowels were still obstinately confined and pressure of that region still painful. "A delicate-featured child with thin skin and light hair, lying apathetic and regardless. The abdomen is slightly distended and some indication of pain is detected on pressure in the left hypochondrium, where also there is more resistance than elsewhere; temp. 103·2°, pulse 128, resp. 24.

Examination of chest with negative result. There are certain hard nodules to be felt in right iliac region which, upon their removal by enema, prove to be fæcal." Such is Dr. Syers' note on admission.

For the first six days night temperature was a little over 103°, morning temperature at or about normal; weight is 2 st. 6 lb.; the child is quiet and listless and without appetite, she sleeps well but sweats during the night. Two actions of the bowels were obtained by enemata. On the 18th May (ten days after admission) her weight had fallen more than a pound (to 2 st. 4 lb. 10 oz.); general level of evening temperature rather lower, between 102° and 103°, normal temperature of the morning being still observed.* On this day, owing to the absence of any signs of improvement and rapid loss of weight, ten ounces of hypophosphite of soda were ordered twice daily. A week later, except that the temperature had fallen to 102°, and that the bowels now first began to act naturally, there was no marked amendment, and on weighing it was found that the child was still losing flesh, although less rapidly than at first (2 st. 4 lb. 4 oz.). On the 29th May the dose of hypophosphite was increased to fifteen grains, the temperature on that day having risen to 103°. It was now the twentieth day from admission, and, as nearly as could be estimated, the end of eight weeks of illness. For the following three days the morning temperature was subnormal and that of the evening 102°. From this time, June 2nd, pyrexia gradually declined and the child's general condition as regards strength, appetite, and liveliness manifestly improved.

On June 8th the child was up, and on the 29th the weight (which had fallen at the lowest to 2 st. 3 lb. 6 oz.) was more by 3 lb. 4 oz. than on first admission, viz. 2 st. 7 lb. 4 oz. The child is now fat and well.

The amendment in this case, as shown in lowered temperature and decreasing languor, became apparent three or

* It is worth remarking of this, as of many similar cases, that a frequent observation of temperature, and especially of morning temperature, will often discover some period of the twenty-four hours—it may be of very short duration—when the body heat reaches the normal line, thus marking a distinction between it and typhoid fever, which may not be otherwise discernible.

four days after commencement of the larger dose of fifteen grains. As the weights are taken only weekly it is not possible to tell the precise date of improvement in this respect; but it is certain that for the first week of the increased dose the child still wasted by a few ounces. It then rapidly gained flesh as just related.

In narrating these cases, the most striking specimens of a larger experience which has been throughout of similar tenor, it has been impossible to do more in the allotted space than to enumerate their more salient features, and less than justice has been done to the careful notes that have been supplied me. Yet with the fullest possible detail none but direct observers can estimate with any precision the actual pertinence and gravity of written symptoms. It is something more than the bare facts, it is the impressions they make that readers are asked to accept. Public practice, indeed, in being open to the scrutiny of many, may carry a greater weight of credibility than private, yet with our best efforts clinical experience must still remain to a large extent personal property. The impressions left upon my own mind by the trial of the hypophosphite of soda, although perhaps apparent already, may now be briefly stated, premising that the drug was never called into requisition until the patient had been observed long enough to make sure that the tendency of the symptoms was not to better but to worse. Speaking generally its beneficial action seems to apply to children who are, so to speak, making for tubercle. The main difficulty, therefore, concerns the choice of suitable examples. They should fall between two categories. They must not be cases of phthisis or gland destruction; for these the drug (speaking from my present experience of it) does not greatly benefit*; neither must they be cases of casual

* I have lately prescribed the hypophosphite in ten and fifteen grain doses to two children, aged respectively two and nine years, in the Hallett Ward. One had a large caseating bronchial gland, apparent to physical examination, and died. (The case is narrated by Dr. Syers in the latter part of this volume.) The other is still in hospital at the time of writing, and has physical signs of excavation at one apex. The symptoms are at present at a standstill, and some credit may be due to the drug in consequence. Chronic phthisis, however, in childhood, is apt thus to remain stationary, and it is not easy in such a case to judge of the influence of medicine.

pyrexia or temporary loss of weight, symptoms common enough with all delicate children, for in such use *any* drug might obtain a cheap and worthless reputation. The instances actually pertinent to the issue are, indeed, hardly capable of exact definition, although no doubt conditions might be insisted on with reference to duration of illness and of previous observation, course of temperature, and loss of weight. But, speaking in general terms, what has to be shown is this: that certain groups of symptoms which, having regard to their usual course and termination, we are agreed to call "tubercular," get arrested by the treatment in question in a way that is striking and anomalous to those whose experience is ample enough to enable them to form a judgment. If this be so, over a considerable period of time and on the testimony not of one but of many, there is then a sufficient answer to the otherwise fatal objection, applicable to individual cases and even to the collected cases of a single observer, that it is more likely the diagnosis was false than that the cure was real.

It has been said that the professional therapeutist contrives sometimes to extract a virtue out of drugs such as they fail to yield to ordinary observation. Whether this be so or not it is at least certain—and I am conscious of it at this moment in my own person—that so soon as a fair presumption is raised on behalf of any medicinal agent, the time has come when the further investigation should pass into other and unbiased hands. If an inquiry of this sort is to bear fruit it must be taken up by those who come to the work fresh and unprejudiced. Thanks to the development of collective investigation and the direction which it has lately taken, the time is at hand when no drug will be accepted on the testimony of any single individual. Here, therefore, I may fitly take leave of the subject, commending it to the notice of the many practical workers into whose hands this first volume of the 'Westminster Hospital Reports' will fall.

The points to which I would call attention are shortly these:

1. The hypophosphite of soda may be given with perfect safety even to very young children, in doses from ten to

twenty grains, the larger dose being sometimes of marked service where the smaller fails.

2. The benefit of the drug in such doses applies particularly to chronic inflammations occurring in "tubercular" children, as well as to the wasting and pyrexia, which, without any distinctly localized seat of mischief, sometimes precede the actual development of acute general tuberculosis in early life.

It remains but to add that I have no theories as to the action of the hypophosphite of soda, and no personal claim of any sort to advance in respect of it. The virtues of such preparations in the treatment of phthisis have long been insisted on in some quarters in emphatic and sometimes extravagant terms. Disappointed in this respect it was after some years' disuse that I came by chance to employ them again as related above. It is only recently that I have been made aware that the dose I have always prescribed—namely, from ten to twenty grains—is much larger than the official one.

CAUSES OF FAILURE IN EXCISION OF THE HIP.

By GEORGE COWELL.

Great advances have been made of late years in the successful treatment of joint disease. The pathology of the morbid changes that take place and the signs and symptoms produced in their early stages have been carefully studied, and the results of these inquiries have been an earlier recognition of the disease, and the discovery of the paramount importance of early treatment. Experience, too, has shown that by the adoption in this early stage of complete rest and the proper hygienic surroundings of an abundance of fresh air, an equable temperature and good nourishing but easily digested food, a complete cure can be assured. Amongst the more educated classes a surgeon is consulted early, the nature of the incipient disease is recognised, the proper treatment and care are adopted, and a cure, even in some cases without any resulting lameness, is obtained. Amongst this class of patients such an operation as excision is almost, if not quite, unknown.

Still in the presence of such favorable results as these we cannot afford to ignore the question of the excision of diseased joints. There is a large class of patients in whom disease is not recognised until it has made serious progress. It requires intelligence on the part of parents to recognise the early and not very pronounced presence of disease. In

our hospitals many cases of advanced joint disease, and especially of the hip-joint, come under treatment, in which the most careful adoption of the soundest principles of treatment fails to arrest the disease, and where sooner or later the question that the surgeon will have to decide is how best to save life and limb.

That life and limb may be most satisfactorily saved in advanced hip-joint disease by a timely excision is a fact of which I am firmly convinced. Three years ago I gave an analysis of sixty-five cases of resection of the hip-joint performed in the years 1869-82 inclusive, in a paper presented to the Surgical Section of the British Medical Association at their meeting at Worcester, an abstract of which was published in the 'British Medical Journal' of August 26th, 1882. From the experience that I had then gained in the wards of a general hospital and of a special hospital for children, together with that which I have acquired since, and especially from a careful consideration of the failures amongst my own cases and of those which other surgeons have acknowledged, on account of which many have been led to form a strong opinion against the usefulness of the operation, I have been led to place on record in this first volume of our 'Hospital Reports' what I believe to be the chief causes of these failures. That there are great difficulties and disappointments inseparable from this operation will be acknowledged by every surgeon who has had practical experience of it, and is proved by the considerable difference of opinion which exists with regard to it.

It is only in the third stage of hip disease when the joint has become disorganised, as shown by the presence of *grating* between the denuded head of the femur and the acetabulum, that the question of excision arises. These observations are throughout restricted to cases of disease. In many of these cases a most satisfactory cure by ankylosis may with proper treatment result. But grating is often accompanied by *pain* which extension or position fails to relieve, by *profuse suppuration* which free drainage does not check, or by *failure of health.* There are many cases in which we find co-existing two or even all three of these grave symptoms of the mischief which is going on in the articular structures.

But any one of them is sufficient when present with *grating* in the joint, and it is still more the case if more than one of these conditions exists, to show that the removal of the head of the femur should be carried out with no further loss of time. In cases of this description more lives are saved and more useful limbs are obtained by excision than by trusting to natural processes. It is essential, however, that the operation be not postponed until tubercular disease is induced by the continuance of mischief, until the patient is worn out either by the pain or the discharge, kept up it may be by the presence of *sequestra*, or until the bone mischief has extended so as to largely involve the femur or the bones of the ilium or both. Here, then, is one great cause of failure —the undue postponement of the operation. I am sure that no slight proportion of the cases of excision ending badly or with great deformity and permanent sinuses are those in which the proper time for the performance of the operation has been allowed to pass by, and that this is one way in which some amount of discredit has been brought upon the proceeding.

Another exceedingly important point in reference to the operation is the *age* of the patient. A rule which to my mind is most firmly established is that the younger the patient the better the result of the excision. The converse of this is also true that the older the patient the worse is the result; and it becomes a matter of great importance to determine whether there is an age at which the performance of excision of the hip-joint becomes unjustifiable. I have long discarded the operation in adults, and in my paper above alluded to I fixed the age above which it was inadmissible at eighteen. I am inclined now to put the age at sixteen or even fourteen. The substitute that we desire for the complex structure of the hip-joint is of course a fibrous ankylosis, that is, the formation and organisation of new material which shall not only attach the shaft of the femur to the acetabulum, but also to the tendons that have been detached from the removed head and trochanter. There is an extraordinary reparative power in young children. The younger the patient the more completely is the formation of new material carried out, the more organised and consolidated the new material will

become, the more it will follow the natural lines of development, and the greater will be the recovery of the command and usefulness of the limb. In my cases the completeness of the repair has been greatest where the operation has been performed between the ages of three and six. These children have all had most useful limbs, in fact, a most complete recovery, with little more than the cicatrix of the wound to show that the operation of excision had been performed. The lameness was exceedingly slight, the inequality of the length of the limbs being practically almost obliterated by a slight compensatory obliquity of the pelvis. This completeness of the recovery is not realised at later ages, and it is curious to see how graduated in point of completeness the results of this operation are, the proportionate shortening and other deformity increasing, and the muscular recovery and, for a few years at least, the subsequent growth of the limb diminishing with every year of age. On the other hand, amongst the older patients, fourteen to eighteen years of age, few of the limbs become in any way useful. There is always considerable shortening and muscular atrophy, and in those cases, where from the death of the patients some time afterwards from constitutional causes or prolonged suppuration, an examination has been possible, the process of repair has been found to be of the slightest, and often without any attempt at the formation of new material between the bones which is so essential if the limb is to become in any way capable of bearing the weight of the body.

The *form of operation* is of considerable importance. It used to be considered sufficient to remove the diseased head of the bone, a practice still adopted by some surgeons. The results of this proceeding have been very unsatisfactory, failing as it does in most cases to arrest the progress of the disease, and in but few cases succeeding in preventing considerable deformity. The unpopularity of excision of the hip with some surgeons is in no slight degree due to the adoption of this form of operation, and those who have tried this method and no other are no doubt quite right in discarding it, or in performing it only in the most favorable cases. My first excisions were performed on these lines and the results obtained in them convinced me that the operation

in its first conception was unsatisfactory, and that either some modification was necessary, or the operation must be abandoned. In its limited form there was, first, uncertainty in dealing with any disease that might be present in the acetabulum, and which often exceeded in amount the disease in the head of the bone, and, secondly, difficulty in keeping the bones sufficiently apart so as to prevent their being brought in contact by muscular contraction. The almost necessary consequence of the bones coming in contact was the lighting up into fresh activity of the morbid changes which in most cases already existed in the adjoining bone. Most surgeons recognised these drawbacks to the operation, and various modifications were suggested, the essence of which was the removal of the great trochanter with the head of the bone. Dr. Lewis A. Sayre, of New York, enforced the necessity of this and proposed a subperiosteal method of performing it, a plan which I have adopted in a large number of my cases, and of which I can speak very highly. I had previously been in the habit of adopting a very similar proceeding in my younger patients, that of leaving a thin layer of cartilage of the great trochanter, so as to disturb as little as possible the insertion of the muscles into it, and I attribute in no small measure to this practice, the complete command of the limb which these young patients have recovered. Another essential part of the proceeding is the careful and complete removal of all diseased or necrosed portions of bone from the acetabulum, scraping away also all granulation tissue which may have been formed in and around the joint during the suppurative process, and freely washing out the wound with a weak antiseptic solution. The incision, which should be made immediately behind the great trochanter as being the best position for drainage, may be closed by two sutures at each end of it, leaving the central inch and a half open for a drainage tube which should reach to the acetabulum, and for the free escape of blood and serum. Perhaps the best dressings are two parallel absorbent pads one on each side of the wound, the whole being covered in by a large pad over the whole hip, secured, and especially at the edges, by some elastic bandage. The limb may be kept extended for a few days by a weight, taking care to

prevent eversion of the foot and rotation of the limb by means of sandbags. I generally, however, at once apply a Bryant's double splint. I have tried many forms of splint, and it is by far the best. It not only enables the surgeon to maintain and graduate the extension, but it is comfortable to the patient and facilitates the dressing of the wound and the maintenance of cleanliness. The child may be lifted out of bed with it or placed in any required position without pain or any relaxation of the extension.

There are three frequent sources of failure in these operations arising from neglect during the after treatment, and it is the main object of this paper to call attention to them. Without constant attention during the prolonged convalescence that must follow excision, and especially of the hip-joint, there are three things which are sure to occur.

1. The external wound contracts so as to interfere with the drainage from the deeper parts of the wound. If pus cannot freely escape, febrile disturbance with elevated temperature, burrowing of pus with sinuses, and fresh bone mischief may be expected. It is of the first importance to avoid this. Hence the surgeon must never relax his attention to the wound, and it is easy by means of the short piece of drainage-tube, and with the aid of the nozzle of the glass syringe to maintain a sufficient aperture.

2. The limb becomes everted. I am sure that this is a frequent cause of diminished usefulness of the limb after excision. As a rule surgeons are very careful of the position of the limb for the first two or three months after the operation, then, perhaps, the case is left to some one else, and the position of the foot is unobserved. Of course eversion takes place from the weight of the foot, and the most critical time for securing for the limb a good position is just when the patient has apparently made sufficient advance in the reparative process to permit of the removal of the splint. The weight of the foot has then, for the first time, perhaps, full sway over the limb, its rotated and everted position is unobserved, consolidation of the new material takes place and the limb becomes fixed in its bad position to the destruction for ever of any convenient power of walking.

3. The limb becomes gradually shortened by the contrac-

tion of the muscles inserted into the femur. In a large number of cases of excision of the hip extension is relaxed too soon. To avoid undue deformity and to obtain a thoroughly useful limb, it is absolutely essential that extension should be maintained until the consolidation of the new material is complete. The younger the patient the more rapidly repair takes place, and it therefore follows that the older the patient the longer must the extension be maintained. The difficulty of doing this and the constitutional risks that these patients run in the process are elements which assist in guiding the determination of the surgeon in fixing the age above which he will not perform this operation. But these are difficulties which he must face, and of which he should count the cost, in all cases where he may determine upon excision of the hip-joint, because he may be well assured that his case will be a failure or at best only a partial success, unless he is able to maintain extension for a lengthened period and until complete consolidation of the new substitute for a joint has taken place.

As plenty of fresh air, and sea air if possible, is highly efficacious for the cure of all joint cases so is it of great importance in the after treatment of hip excision. Some of our cases do not do well because they are kept in hospital too long, and it is very difficult to avoid it in face of the risks to which I have above alluded. In the summer months there need be little difficulty in getting these little patients out of doors. With Bryant's splint properly applied they may be lifted, two children side by side, into a kind of truck on wheels. At a later stage they may be still more easily moved with a Sayre's splint carefully applied to maintain extension. Some day, perhaps, a hospital may be built at the seaside or in the country for the special treatment of cases of hip disease. Incipient cases would profit equally with the more serious cases and both would probably get well much more rapidly than in town hospitals. But after all the great desideratum is to diminish the frequency of the necessity for operative interference, a possibility dependent upon a considerable rise of intelligence on the part of the parents of these poor children, which will prompt them to seek an early treatment of all cases of joint disease.

INTRODUCTION TO A COURSE OF CLINICAL LECTURES.

By Dr. ALLCHIN.

Gentlemen,—The regulations of our curriculum require that you should receive clinical instruction in medicine as well as systematic lectures, and in commencing with you a course of the former I think it desirable to point out its exact aim and scope as well as the relation that it bears to the latter in the scheme of your work.

At the systematic lectures you have described to you, as completely as may be, the diseases of the body generally and of the different organs and tissues. One after another, the various theories of causation, the symptoms and signs, the morbid anatomy, the diagnosis and prognosis and treatment are fully and elaborately detailed and criticised, with the aim of providing you with a knowledge of each particular disease, complete up to the present state of our information. It is a growing feeling that the time so spent might be better employed, and that you could obtain all you require in this direction from books; reading at your own convenience and devoting the "lecture time" to more ward work. I am not concerned now to defend the present system, though I may express the opinion that a not unsatisfactory way of meeting your yearly increasing work is to increase your necessary period of study. But I am desirous of impressing on you the importance and advantage of possessing yourselves with

a systematic knowledge of disease, whether you can best obtain it from lectures or from books. Whilst believing very properly that the right way to equip yourselves to follow a practical profession is to study your work practically, you may fall into the error of thinking that you can learn *all* your subject by the bedside and in the post-mortem room.

The enormous extent of ground covered by disease absolutely precludes any student in the brief months of his stay at a hospital from making himself practically acquainted with every form of malady, and I regret to say that the rapid development of special hospitals within the past few years keeps from our wards many desirable cases, and so narrows your field for study. Even with the cases that do present themselves to your observation, some connecting link is required to give coherence to your ideas, which are otherwise apt to assume a dangerously vague and sceptical form. It is unreasonable to expect you to obtain a working knowledge of your profession from the mere study, however careful, of the comparatively very few cases that will come under your individual notice in the wards. To attempt such a task would be to deprive yourselves of all the advantages of the positive knowledge that has been accumulated by past workers, and, however impressive it may be to ascertain by your own labours certain facts, time unfortunately would very narrowly limit the number of facts so acquired. You can at best do little more than learn how to observe and how to teach yourselves, and the better regulated your scheme of learning is the more valuable will be your ground-work, which you can expand and alter as you come to possess the requisite knowledge. Acquire some definite rules to begin with and leave the exceptions until later.

From the historical point of view it would be easy to show that clinical study preceded in point of time systematic exposition. The former, as might be expected, collected the materials to be arranged for the latter. Had the progress of our science and our art followed in these lines we might reasonably suppose that we should be a good deal more advanced than we are at the present day. Such a plan would have made observation the foundation, and supplied the facts from which to establish laws. Unfortunately the

reverse process was followed for many centuries with the result of obscuring and gravely impeding the advancement of our knowledge.

Dating the rise of the healing art from Hippocrates and his school, we find in his writings the clinical records of cases that are remarkable examples of observation with the limited means at his command, and in the absence of any accurate anatomical or physiological groundwork. We know also that students received their instruction from the "father of medicine" and his disciples at the bedsides of the sick. The accounts that remain to us of clinical and, indeed, of any medical teaching in these early times are of necessity scanty, but the oft-quoted sarcasm of Martial (A.D. 43—140) at least shows some similarity to later procedure:

> "Languebam; sed tu comitatus protinus ad me
> Venisti centum, Symmache, discipulis,
> Centum me tetigere manus, aquilone gelatæ;
> Non habui febrem, Symmache, nunc habeo."
>
> EPIGRAMMATA, lib. v, 9.

which has been thus translated:

> I send for Symmachus; he's here,
> A hundred pupils following in his rear.
> They feel my pulse, with hands as cold as snow;
> I had no fever then, I have it now.

Nor would it seem that they were quite free in those days from what has been often regarded as a special product of modern educational systems, "the crammer." At least, Galen ('Methodus Medendi,' lib. i) inveighs strongly against one of the class who undertook to provide a complete education in matters pertaining to the physician in six months, a period even then regarded as ludicrously inadequate.

But from the time of the downfall of Roman culture and science the study of medicine ceased to be a practical undertaking. The teaching of it was limited to discussions and expositions of what Hippocrates, Galen, Celsus, Aretæus, and others had *said* and *written*, and the very last thing that the student of medicine did was to go to the patient and study him. Doubtless some slow progress was made in anatomy and chemistry, but until the latter part of the seventeenth century, the science of medicine was a succession

of antagonistic theories and systems, either founded upon *a priori* conceptions of what should be, wholly irrespective of what actually was, or distinctly referable to the prevailing school of philosophical speculation.

The modern scientific method dates its origin from Bacon (1561—1626), and our subject gradually came within its embrace, the immortal Harvey (1578—1658) by his publication of the discovery of the course of the circulation of the blood in 1619, occupying the first and most honoured position in the long roll of observers and experimenters on the problems of living things. Among those who were especially prominent in adopting the new lines of research, and, disregarding all theory and system, limiting themselves to what they saw and observed, was Sydenham (1624—1689). It cannot be said, however, that he left much of permanent value, owing to his neglect of anatomy and physiology, but as the first English physician who returned to the method of Hippocrates, to the actual study of disease, and to the observation of the patient's symptoms and environment, he claims a high place in our regard.

To Hermann Boerhaave (1668—1738) belongs the credit of establishing the method of medical study in its present lines. Like Sydenham, throwing off the shackles of theoretic imaginings and systems, making and basing his views upon the observation of the sick themselves, but, unlike our countryman, endeavouring to establish a relationship between the recognised phenomena of disease and ascertained anatomical and physiological data, he was enabled thereby to ensure for his teaching a surer foundation, added to which his connection with the celebrated school of Leyden gave him the opportunity of spreading his knowledge and method by means of pupils, who flocked to him from all parts of Europe. After his death was published an introduction to clinical practice,* which may be taken as the first of those manuals for the bedside, of which each year almost brings fresh claimants for our favour, with too often but slight justification for their appearance. The 'Hints for Clinical Clerks,' which serves as a guide to the beginner to what to observe

* 'Introductio in Praxui Clinicam; sive Regulæ generales in Praxi Clinicâ observandæ.' Lug. Bat., 1740.

and "how to take a case," find a remarkably close similarity in this old work of the great Dutchman. Baglivi (1668—1706), whose dictum, "Ars medica est tota in observationibus" justifies the mention of his name among the pioneers of clinical medicine.

It must not be supposed, however, that theory-hatching and system-making, the practice of centuries, died without a struggle. Contemporaneous with Boerhaave lived Hoffmann and Stahl, Professors of the University of Halle, with whose names two very different schools of pathological doctrine are associated, both agreeing, however, in misinterpreting the facts of disease as presented in the wards and post-mortem room, and for the main part concerned in the to us wholly unimportant question of the relative superiority of materialism or animism. As having some influence on the progress of medical practice and contributing a share mainly to be regretted in forming the complex profession we now pursue, these theories are worth a moment's attention. Stahl (1660—1734) enumerated as his leading principle "that the rational soul of man governs the whole economy of his body," which was in reality one way of interpreting the "vis medicatrix naturæ," which had been talked of and written about since Hippocrates and in which Sydenham placed such confidence. It was easy to push his ideas too far, and this Stahl did. Conceiving that the soul might act independently of the state of the body he taught that it would in recognising the presence of noxious influences induce in the body protective activities and so ward off the threatened injurious effects. Throwing the responsibility of the avoidance and treatment of disease on the rational soul led, as might be anticipated, to so-called "expectant medicine" and nihilism in therapeutics, a danger that at the present day is not clearly defined, and which you as students should guard yourselves against as carefully as you should from over-drugging. In forming a proper judgment on this essentially important question you will find materials in your ward work. To Hoffmann (1660—1742) is to be fairly attributed the first intimation of nervous influence as a cause of disease, but intermixed with so much false humoral pathology as practically to counteract the undoubted importance of the

conception. It is interesting also to remember that the system of Hahnemann (1755—1843) known to us as homœopathy originated about this time.

Although Boerhaave may justly be regarded as the founder of modern clinical medicine, it is rather in the method he pursued than in what he actually said and wrote that his claim would chiefly lie. From our present standpoint much of his teaching is quite inadmissible. Having selected most laboriously and judiciously from the writings of his predecessors from the earliest times (from which he was entitled the modern Galen, as Sydenham was spoken of as the modern Hippocrates) all that he deemed the best, and adding thereto the experience derived from observation, and aiming at associating his results with the facts of anatomy and physiology, he nevertheless was not free from the prevailing doctrines of humoral pathology, and so far fell short of what we now believe to be the right view; but his method, as I have shown you, was sound, and it remained only to advance on the lines he had laid down. For this advance to be effective it must have been in four directions. First, in the improvement of further anatomical and physiological knowledge as providing a secure base for the study of diseases. Second, the accumulation of the facts of morbid anatomy and establishing it as a distinct but correlative branch of inquiry. Third, the improvement in the means of observation, since it was to be by observation that medical science would progress; and, fourth, the actual bedside study of disease by a mind stored with the knowledge of anatomy and physiology, armed with the most perfect instruments of research, and aiming at associating clinical phenomena with observed post-mortem conditions. This has been the line along which our profession has progressed more or less steadily for the past century and a half, and along which it promises to lead to still greater results than it has done,—a path of observation and experiment, based on ever-increasing positive knowledge, and tempered by what has been aptly called a "scientific use of the imagination."

It would lead me too far, and, indeed, it is somewhat apart from my present aim, which is to sketch to you the

development of clinical medicine, were I to trace here the progress of anatomical discovery from the time of Herophilus and Erasistratus, of the Alexandrian school, about 300 B.C., when it first began to be pursued in a systematic manner. It will be sufficient to remind you that whilst pre-eminently a science of observation it is only quite recently that it has been recognised as the basis of medicine, or, in other words, that function, whether healthy or morbid, is an expression of structure, and such a view could obviously have not been established until a very considerable amount of minute anatomy was known. In past times it was more in relation to the cases that came under the surgeon's care that it was studied, diseases as contrasted with injuries being regarded in the main as so many entities that obtained entrance into the body in one way or another. Progressing but very slowly for many ages it made brilliant advances in the sixteenth century, by the labours of Carpi (1518), Sylvius (1489—1555), Vesalius (1514—1564), who first produced anatomical plates drawn from nature, Eustachius (?—1574), Fallopius (1523—1562), and Fabricius ab Acquapendente (1537—1619).

In the next century the foundations of microscopic anatomy were laid chiefly by Malpighi (1628—1694) and Leuwenhoëck (1632—1723), who prepared the way for the 'Anatomie Générale' of Bichat, published in 1800, from which the science of histology may be said to date.

Turning to physiology it can be scarcely considered as having existed in any but the most scattered form previous to Haller (1708—1777), who was a pupil of Boerhaave, and is justly regarded as the founder of modern physiology. Offering as this subject does a wider field of speculation than does anatomy, its progress has not been so steady, liable as it has been to have the phenomena that it deals with misinterpreted and misplaced by the prevailing theory of the day; it has nevertheless succeeded at last in shaking itself free, and helped by the facts of chemistry and physics, and pursued on a path of rigid experiment and careful observation, it is slowly taking its place among the more exact branches of knowledge.

Until anatomy, histology, and physiology had made good

their position it was clearly impossible that the present conception of disease being but altered function due to altered structure, could have been formed.

It was not long before the spirit of inquiry and observation that characterised the time bore fruit in the direction of pathological anatomy. In 1760, when nearly eighty years old, Morgagni published his classical work 'De sedibus et causis Morborum,' based upon a large number of post-mortem examinations. This line was eagerly followed up by others, and especially by our countryman Matthew Baillie (1761—1823), whose collection of morbid specimens forms the greater part of the museum of the Royal College of Physicians. Nor must William and John Hunter be passed over in silence, since a share of their great fame is attributable to their pathological observations, and it may be mentioned that their collection of specimens, healthy and diseased, form the nucleus of the museums of the University of Glasgow and the Royal College of Surgeons, London, respectively.

No break has occurred in the diligent accumulation of pathological facts as displayed by the investigation of the dead, and just as healthy anatomy extended by the help of the microscope into histology, so was the study of the minute morbid changes in the tissues entered upon and pursued with great industry and great results. Indeed, it is in these directions that the greatest number of additions to our positive knowledge is being made at the present day.

The progress of pathological principles (and I mean by that the laws of morbid action deducible from the symptoms of disease which on their part are the manifestation of the perverted structure as revealed by the microscope) has not been so steady. Hampered by the crude and erroneous notions of the schoolmen and systematizers, pathology, like physiology, lagged behind, and offered a tempting field for wordy disputation and theorising. Solidists, humoralists, pneumatists, and hosts of rival schools fought with one another with no result to us beyond a legacy of a few words and half-expressed notions that tinge our doctrine and our practice to the present day, often to no good purpose. But you must not think that there remain no questions in dis-

pute, or that the principles of morbid action are yet capable of being accurately formulated. The mere mention of such intricate problems as the "germ theory of disease," "heredity," the "specific origin of new growths," the "intimate nature of inflammation," among many others, is sufficient to dispel any such idea. But though we may be far off the solution of these questions we claim to be pursuing their investigation along rational and strictly scientific lines, and account their explanation as a thing to be achieved in time.

The history of the discovery and the evolution of our instruments and means of research form an interesting chapter of our subject. Begotten of the rising and still growing need for improved methods of observation, the senses of touch, hearing, and sight, by which such observation could be made, were specially and technically cultivated with the result of introducing and developing what we term percussion and auscultation with the pleximeter, plessor and stethoscope, and the many forms of optical apparatus of which the microscope, ophthalmoscope, and laryngoscope are the most important.

The essentially important phenomena connected with the range and fluctuation of the body temperature have been brought under accurate registration by the clinical thermometer, and the sphygmograph, cardiograph, and hæmacytometer, though of more restricted use, help us more accurately to ascertain and record certain conditions of the organs and tissues than our unaided senses would otherwise permit of. In this same category I may refer to the chemical analysis of the excreta, particularly of the urine, as a method of inquiry into the nature of the activities of the body. To what degree of perfection the employment of these various instruments has been brought you will hereafter learn, but I may here impress on you the importance of diligent practice in their use. To be skilled in their manipulation requires much labour, and unless you know them well, and know above all what are the limits of their use, they are apt to prove dangerous tools. It is possible of course to carry their employment to an extreme, and to neglect in their abuse the true import of the information they furnish, but

the share they have taken in judicious hands in advancing the practice of clinical medicine it would be impossible to estimate; without them we should be almost powerless.

Of clinical instruction, whether in the form of bedside teaching or the publication of recorded cases with comments thereon, the progress was most imperfect and halting. From the fragmentary information we possess of the teaching in the early schools of the Asclepiads and the immediately succeeding Hippocratic Roman and Arabian physicians, it is difficult to form any complete notion of the procedure followed, and it is not until the latter end of the 16th century, in 1578, that we meet with any account of definite clinical instruction at Padua, in the hospital of St. Francis, by the Professors Bottoni and Oddo. But even this was of a most incomplete character, and appears to have ceased with the death of the initiators, to be soon resuscitated in the early part of the next century, at Leyden, by Otto de Heurn, who introduced the practice of giving bedside instruction. He was succeeded by Silvius, who developed the method most successfully, and from 1658 to 1672 gained the highest reputation for his teaching and paved the way for Boerhaave, whose pre-eminence I have referred to. It was from Leyden that clinical teaching, as we understand it now, spread over Europe. In 1715, Lancisi established a school on a similar plan in Rome; Vienna, where Van Swieten, in 1733, commenced clinical teaching, Pavia and other cities followed suit, and in this country, Edinburgh may claim to have first founded a clinical chair in 1746 on the recommendation of Lord Provost Drummond, at the Royal Infirmary. Dr. Rutherford, the first professor of clinical medicine, held office for twenty years. (A manuscript copy of his lectures is in the library of the Royal Medical and Chirurgical Society, where also is a similar volume of lectures by Cullen, dated 1773). The Chair of clinical surgery was not established in the University until 1802, though there had been irregular teaching for some years previously. In 1785, four wards in Mercers Hospital, Dublin, were set apart for the reception of cases for the lecturers of the Royal College of Physicians. The present London medical schools as they now exist are, as you are probably aware, quite a modern

arrangement. Most of the systematic courses were formerly held at private schools, apart from the hospitals, the history of which forms a most interesting chapter in the annals of our profession. But so far as bedside study of disease was pursued, scattered mention of "apprentices," "cubbs," and "dressers," occur in the records of the grand old hospitals of St. Bartholomew (1123) and St. Thomas (1207) so long ago as 1561, but such study was scarcely comparable even in plan to present-day arrangements. From the early part of the last century, following, that it is to say, on the method initiated at Leyden, clinical instruction gradually became more definite and better regulated, so that the students of the large private schools of Windmill Street (founded in 1746 by William Hunter), of Blenheim Street, of Gerard Street, of Aldersgate Street, and others, who learned there such subjects as anatomy, physiology, botany, chemistry, did their clinical work or "walked the hospitals" of St. Bartholomew, St. Thomas, and the newly started institutions of Westminster (1715), Guy's (1722), St. George's (1733), and the London (1740). It was at the last named that the first complete school in direct connection with a hospital was established in this city in 1785, and in a prospectus of the same dated 1792 "clinical cases" with special instructors form an item on the list of courses. In 1822 the late Dr. Billing instituted at this same hospital clinical lectures said to be the first of the kind delivered in London. And gradually from such beginnings has our present system grown.

With such a sketch of the progress of our science and art, especially in reference to its practical side, let me now turn to point out what clinical instruction should do for you and how it may be obtained.

Standing by the bedside of a patient in the wards, or here in the theatre, where it may be convenient to bring a case for demonstration, you will observe for yourselves and will be shown how to recognise the departures from healthy functions which we call the symptoms of disease, incidentally acquiring and formulating in your own minds that most difficult of all notions, a standard of health. And this study of morbid manifestations you will pursue for the most part,

whilst their causal structural changes are hidden from your view and are a matter of inference and conjecture. The grounds for drawing your conclusions as to the nature of the existing anatomical alterations are derived from your previous knowledge of gross and minute anatomy supplemented by the information supplied by the post-mortem examination of the cases that have been under observation. And you will do well always to assume the existence of some structural lesion, however minute or remote, as underlying the functional disturbance you are watching. It may be that the lesion is beyond our present means of .recognition, but wide as is the field of the undiscovered, constant fragments are being snatched from it, as one by one the so-called "functional diseases" are coming to have their structural causations recognised.

In making a diagnosis, or ascertaining what is the matter with a patient, which is your first duty, before ever the idea of what you should do for him occurs to you, your aim is to discover what organ and what part of the organ is affected, what component tissue of it is abnormal, and, if possible, *how* it differs from the healthy. Let your first efforts be directed to learn as completely as you can the structural damage that exists. Herein lies, as you know, the chief difference between the practice of medicine and surgery. In most cases that fall under the latter the lesion is patent and obvious, though not always so; whilst in the cases you will find in the medical wards, your arriving at a conclusion as to what is at fault is a matter of judgment founded upon evidence from various sources, obtained in various ways, and of very various value.

In studying the phenomena of special diseases as they occur in a patient, you will be in a different mental attitude to what you will occupy when investigating the course of general morbid processes. For example, that form of departure from healthy nutrition expressed by the term "inflammation" is characterised by certain essentials, whatever the organ or tissue which may be involved; but beyond these are certain special features characteristic of each organ affected, and which usually constitute the noticeable symptoms of the sufferer. Thus, the symptoms presented by a case of acute

pneumonia and of acute nephritis are markedly different, determined by the difference in the organs which are equally the subject of inflammation. For the study of such general perversions of nutrition you will have to depend on systematic instruction, illustrating the information you thus obtain by the special affections you meet with in the wards.

Clinical medicine then is the study of disease as it occurs in a patient, as opposed to its description in a book, and points out how a case illustrates the general principles and general account,—in short, how the idiosyncrasies of the patient modify the classical standard, which itself has been obtained by the study and collation of numerous cases. Our work will therefore come to be, to a great extent, the study of exceptions. But I conceive it to be my duty first to point out and insist upon the more common and general points, leaving the exceptions for secondary consideration. For you should remember that in the time at your disposal here you will be fully occupied in learning how to observe and to familiarise yourself with the salient features of disease. You will be students so long as you shall be in practice; and much of the value you may obtain from the lessons you will learn when you leave here will depend on the attention you have bestowed in acquiring a sound and scientific *method* of observation.

In obtaining the evidence upon which you found your diagnosis you will have to learn the very difficult art of questioning a patient and accustom yourselves to estimate at their right value the answers you will obtain. A person who is ill may present certain indications of disease, the detection of which is your duty, to be performed by the means of your senses, sight, touch, hearing, &c., aided or not, as the case may be, by special instruments, microscope, probe, thermometer, stethoscope, &c., familiarity in the use of which is all-important to you. The training of your senses to correctly observe the facts that the patient presents is your special business during your student career. The faculty of observation you may improve in many ways, and early training in this direction, such as the collecting of insects or plants, does much to fit the young boy for his future work. Were it possible, as is sometimes the case, accurately to note

all that is wrong in any patient, the diagnosis is likely to be easy; but far oftener this result cannot be obtained, and many of the abnormal features can only be inferred from the evidence that is forthcoming, and hence an element of uncertainty enters into the diagnosis.

Supplementary to this recognition of the objective signs and symptoms you will have recourse to the patient's own statements as to the presence or otherwise of such subjective conditions as pain (which occasionally may constitute the entire malady), and also for obtaining information as to the habits of the individual, the occurrence of previous illnesses, the mode of onset of the present attack, and any symptoms that may have occurred before coming under observation. This knowledge you will obtain by a series of well-directed questions, which it is desirable that you should put in such a way as to elicit the truth without suggesting on your part the answers. It is often desirable to allow the patients to tell their own story first, subsequently putting leading questions, and in such cases it is desirable to use in your records the patient's own expressions, not translating them into the terms of pathology. When to stop a too voluble patient, or when to discredit the replies you obtain, are points that you must learn for yourselves. You will see in the wards from time to time illustrations of most diseases, and it will be my duty especially to direct your attention to the points in each upon which the patient's own information is of value, and how you may best by question obtain it. Obviously the better acquainted you are with that "proper study of mankind,—man," or in other words, the more you know of human nature, the better you will be equipped for pursuing successfully this part of your work. Let me also in this connection remind you of another hackneyed, yet none the less applicable, saying, "humani nihil a me alienum puto." Never despise the acquisition of any information, however seemingly trivial. You can have little idea how very valuable some scrap of knowledge of a trade or calling, of a place or people, picked up perhaps in the most casual way, will help you in learning fully the condition of a patient. If you possess such knowledge you will the more readily appreciate the life and surroundings of the sufferer,

who, as he sees you meet his answers with the readiness begotten of information on your part, will the more readily repose confidence in you, a thing not lightly to be esteemed; whilst from another view it may help you the more correctly to estimate the value of the answers your patient gives you, and lead you neither blindly to accept nor reject all that you are told. Our profession is one that beyond all others opens up to the outsider the manner of living of our fellow-creatures, and the nature of the environment, whether in recognising the causation or in suggesting treatment, is a factor of the highest importance. I need scarcely remind you that in your procedure you will be frequently deceived, sometimes wilfully, sometimes unintentionally, and although you must be alive to the fact that you may be misled, I would not advise you to cultivate too strongly the notion that every patient is lying either in word or deed. Some satisfaction may be felt at the detection of a malingerer, but it is better in the end to be occasionally imposed upon than to dismiss a real sufferer as an impostor. Believe your patients to be really ill until you find they are not.

In obtaining and recording the histories of your patients you will be advised to preserve an orderly plan, which you would do well in all cases to follow completely; time enough when you know more to disregard those inquiries and those statements which have no bearing on the case. There are many situations in after-life, such as examining for life insurance, for physical fitness for the services and civil employments, when the previous habit of systematic questioning will stand you in good stead. Incidentally I might say that a carefully-observed and well-recorded case adds not only to the knowledge of the observer, but may increase the general knowledge of the natural history of the disease in question, and extend or correct the received classical account. In this way also changes in the type of disease and even new maladies come to be recognised.

When you have made your diagnosis the important question comes, What is to be done for the patient? Can he be cured? Can he be relieved? Remember it is in the answers to these questions that the practice of your art lies. You are aiming at being medical men whose business it is to

treat disease, and it behoves you to be as perfect in your business as you can. To this end I would advise you to start with a belief that I feel sure you will subsequently justify if you do not wilfully shut your eyes to what stares you in the face, that we do possess the power of successfully treating disease to a very vast extent, and further, that you may hold this belief without being therefore of necessity open to the charge of credulity that might be brought against the believer in the all-curing virtues of a quack ointment or pill.

Most of you probably will from time to time become a little sceptical as to your powers, and no harm will come from that, but I earnestly hope that no one of you will start in practice with a conviction of the uselessness of doing anything at all for the sick who may come under your charge, and that your duty begins and ends with recognising and naming the disease, and putting the treatment in the background. I would point out to you that of necessity the larger number of the cases that are met with in the medical wards are serious and very many are quite incurable, and to found your belief in the efficacy of treatment in such cases only would obviously be unfair. By the term treatment is meant to include all that can be done for the sick, from making the bed on which he lies to the diet and the medicines that he takes. Here in a hospital where all that is needed is at hand, and with the careful execution of directions by skilled nurses, you will find yourself very differently placed to what you generally will be in private practice, when much of the actual administration of treatment will devolve upon you, and often with very indifferent appliances. Take every opportunity of learning how a nurse's work is done, and do not think that making a poultice is beneath your attention. Though perhaps not so skilled by practice as should be a trained nurse or dispenser, you ought to be as fully acquainted with all the details of preparing and applying the treatment you order.

On this subject of scepticism in regard to the remedial power of drugs, listen to what Sir William Jenner, one of the greatest of clinical teachers, and who, if possible, is more distinguished as such than he is as a practical physician,

says:—"Now for myself I desire to repudiate absolutely scepticism in regard to medicine. I believe as confidently in the power of physicians to treat disease successfully as I did when clinical clerk to one of the first practical physicians of my youth. Extended knowledge and accumulated experience have only increased my confidence in the remedial powers of our art." Mark the last sentence well, I beg of you, and do not suppose that because you are ignorant of the exact *modus operandi* of any drug in the body that you are therefore not justified in using it; we are far from knowing the precise changes that take place in the bread and meat that we eat, or how the food is ultimately assimilated, but we do not starve ourselves because we lack that knowledge. "How do you know your patient would not have recovered without your remedy?" is a question you will often hear asked. The propounder of such an inquiry usually is incapable of seeing what is before him, and your time would be wasted in trying to enlighten one who will not see. You will learn, I hope, also that much depends on how drugs are given, at what time of the day in relation to meals, in what combinations they may be best borne, and what are the most suitable doses, and their frequency of administration. This is a branch of an art which is far less cultivated now than it was formerly, and, as I think, to our loss. It constitutes much of the unwritten part of our procedure, but nevertheless contributes materially to the success of treatment and therefore to the credit of the physician. We are still obliged to confess that the healing branch of our profession still lags far behind the progress of ætiology, semeiology, or diagnosis, and it is still true, as Trousseau wrote twenty years ago, that "in therapeutics experiment is much more difficult; the data of the therapeutic problem are so numerous, the results so uncertain and deceptive, that it is impossible to arrive at a conclusion rapidly; and the conclusion when attained is far from being always susceptible of rigorous demonstration." Nevertheless it is not quite so true as it was, and the steady work that is being done in pharmacology is resulting in furnishing us with drugs, the exact properties and effects of which we do know and which are most reliable weapons with which to combat disease.

Such, then, is the work which is before you. In endeavouring to master it, you will be met by many and great difficulties, some of them inseparable from the subject and only to be removed as our knowledge becomes more accurate, others, on the contrary, are to be attributed to vague habits of thought and of expression; to a shrinking from being definite and from accepting facts. Do not confound negation with wisdom, nor regard scepticism as a mark of superior intelligence. "Abelard bids us understand that we may believe, Anselm bids us believe that we may understand."

THE RADICAL CURE OF HERNIA.

By C. MACNAMARA.

Case 1.—J. K—, æt. 22, was admitted into the hospital on the 18th of October, suffering from an incarcerated inguinal hernia on the right side. After an accident some three years ago this man discovered that he was ruptured, and he was then directed to wear a truss. The patient with difficulty procured an order for a truss, but it failed to keep the contents of the hernia in the abdomen; he tried a second instrument with no better result, and consequently discontinued wearing his truss. J. K—'s general health had been good and his bowels regular up to within three days of his coming into hospital, since which he had not been to stool. On admission an irreducible and very painful hernia was found in the right groin extending into the scrotum.

As the pain in the groin extended to the abdomen, and no fæces had been passed for four days, the patient vomiting constantly from within twenty-four hours of his admission into hospital, it was thought right to perform herniotomy without delay. On the 24th of October the hernia was cut down upon and the sac opened, some adhesions were broken through, and a small portion of omentum which was attached to the inner and lower part of the neck of the sac was removed. The neck of the sac was then ligatured and the pillars of the ring brought together with a strong cat-gut

ligature. The wound healed without suppuration, and the patient left the hospital on the 11th of December, wearing a light truss. He was seen a month afterwards, up to which time there had been no symptom of a return of the hernia.

Case 2.—E. C—, æt. 47. This woman was admitted into hospital on the 11th of December; she had suffered from a femoral hernia on the right side for ten years. The patient had not worn a truss, but there had never been any difficulty in reducing the rupture until the day before she came into hospital.

On admission a femoral hernia was found to exist on the right side which it was impossible to reduce by taxis; the tumour was tender on pressure. The bowels had not been opened for three days, and there was constant bilious vomiting. Ice was constantly applied over the hernia, and opium administered. On the 12th, as the symptoms of strangulation continued, and the matter vomited had a tendency to be stercoraceous, it was decided to perform herniotomy. The hernia was cut down upon and the sac opened. The bowel was of a deep claret colour. The stricture was divided and the intestine returned into the abdomen. The sac was easily separated from the surrounding soft tissues, and its neck having been ligatured the fundus was excised and the wound closed.

The patient made a good recovery and left the hospital cured on the 11th of January. There has up to the present been no return of the hernia, although the patient has not worn a truss.

Case 3.—W. L—, æt. 6 months. This was a puny syphilitic infant with a big congenital inguinal hernia on the right side.

On the 22nd of April an incision an inch and a half long was made over the hernia and the structures divided down to the sac. The hernia was then reduced and the sac opened. The cord having been isolated a catgut ligature was secured round the neck of the sac, and the pillars of the ring were brought together by means of a catgut ligature.

The day after the operation the scrotum was much

swollen, and subsequently some two ounces of bloody fluid was drawn from it. The following day the abdomen became swollen and tender, but these symptoms soon subsided, and the little patient made a good recovery, leaving the hospital without any return of the hernia.

Case 4.—H. N—, æt. 2, suffering from a congenital hernia on the right side; the parents brought the child to the hospital to be operated on for the cure of his rupture. On the 29th of April I cut down upon the sac, returned its contents into the abdomen, and then incised the sac. The spermatic cord was isolated, and the sac having been separated from the surrounding tissues its neck was tied, and the pillars of the ring brought together with silver wire sutures. The wound healed without suppuration, but a month afterwards an abscess formed in the groin; I rather think from the irritation caused by the silver wire used to bring the pillars of the ring together. The abscess healed, and the patient has had no symptoms of a return of the hernia.

Case 5.—W. S—, æt. 18 months. In this case of congenital hernia the operation for the radical cure was performed on the 27th of May, catgut ligatures being employed to bring the pillars of the ring together; the wound healed without suppuration. This patient has since the operation gone through an attack of whooping-cough, but no return of the hernia has occurred.

Case 6.—W. B—, æt. 12, was admitted into the hospital on the 27th of December with congenital hernia on the right side. The patient had been placed under my care for the radical cure of hernia, being unable to earn his living in consequence of the rupture which was of considerable size. On the 3rd of January the operation was performed in the usual manner, the wound healed without suppuration, and the lad left the hospital within a month, with no symptom of a return of the hernia. In this case a light truss was supplied to the patient, as he had come from a workhouse, and was likely to have to labour hard for his living.

These patients have been under my care in the hospital during the past twelve months, and I have given a brief outline of each case, because, as a whole, they illustrate the conditions in which the radical cure of hernia may be undertaken. Within the last ten years there has been a marked change in our practice with reference to surgical affections of the abdominal cavity. This change of opinion has been effected as we have gradually learnt to recognise the fact that there is no special danger attending incised wounds of the peritoneum. But while this idea has been gaining ground we have discovered that peritonitis is easily excited if fluid containing organic matter, after being exposed to the atmosphere, is shut up in the peritoneal cavity. I believe the recognition of this principle has been the chief cause of the success attending the operation of ovariotomy, for if a small opening is made through the walls of the abdomen, and the cyst while being emptied of its contents occupies the wound, so that fluid cannot pass back into the peritoneal cavity, one of the chief dangers of peritonitis is avoided. In like manner adhesions should if possible be tied before being divided, or torsion applied to the vessels so as to avoid hæmorrhage into the peritoneum. But living blood is less likely to cause peritonitis than the fluid from a cyst, and the risks of inflammation are certainly diminished if the Listerian system of dressing is employed. There can be no question that, next to preventing putrefaction by antiseptic dressings, the most certain method of avoiding peritonitis in these cases is to employ thoroughly efficient drainage, so that the putrefying organic matter may not be retained in contact with the surface of the peritoneum.

Accepting these principles we may approach the subject of the radical cure of hernia, always remembering that children, as compared with adults, are very tolerant of surgical operations which do not involve any great loss of blood. Various proceedings have been described for the radical cure of hernia, some of them being devised with the object of closing the abdominal ring without touching the sac, others for ligaturing the neck of the sac, and lastly those in which it is attempted to close the ring, and at the same time to obliterate the sac or pouch of peritoneum through which

intestine or omentum passes outwards. With reference to these proceedings Dr. K. M'Leod remarks, with a conviction of the great power which the antiseptic method conferred in dealing with the peritoneum, that in cases in which it is considered desirable or necessary to operate for the radical cure of hernia, nothing short of its extirpation by exposing and isolating the sac, ligaturing its neck, removing its fundus, and bringing the sides of the canal together, afford a satisfactory ground of hope of effectual remedy.* My views on the subject are accurately expressed in this passage, and it would consequently be useless for me to discuss the various other operations I have alluded to. There is one point, however, with reference to the radical cure of hernia, which, as Mr. Banks remarks, requires a word in passing, namely, that the term "radical cure" is open to objection. For in the majority of cases a radical cure is not effected, an operation being insufficient to eradicate the predisposition that exists to a hernia. It is consequently necessary in the greater number of cases of acquired hernia for the patient to wear a light truss after the operation. But this objection hardly extends to instances of congenital hernia; at any rate I have children under my care who have been operated on for three years and have not worn trusses, one of them having passed through a severe attack of whooping-cough without the hernia reappearing.

The question naturally arises as to the class of patients in which this operation should be performed, and our cases seem to illustrate this point. The first of the series is that of hernia occurring in a labouring man who had tried various trusses, but these instruments had failed to prevent the rupture descending into the scrotum, and he came into hospital suffering from an incarcerated inguinal hernia on the right side. By constant application of ice-bags over the hernia and the administration of opium the rupture was reduced, but we knew that this was only a temporary relief and that at any time strangulation of the hernia might occur. The patient wished to undergo an operation. On opening the sac I found a small portion of adherent omentum fixed in

* 'Operative Surgery in the Calcutta Medical College Hospital.' By K. M'Leod. P. 199. Churchill, 1885.

the neck of the sac; this had doubtless acted as a guide along which a portion of intestine had passed into the inguinal canal in spite of the various trusses he had used. Among young adults, especially those who have to gain their bread by manual labour, if a hernia cannot be kept from forming by means of a truss, we should operate in the hopes of occluding the neck of the sac, and also the dilated abdominal ring.

The second case on our list is that of a patient suffering from a strangulated femoral hernia. In these cases the sac is usually comparatively small and easily detached from the surrounding structures, and its neck as it passes through the crural opening can be readily transfixed by a ligature and tied. In cases of femoral hernia there is no difficulty with respect to the cord as in instances of inguinal hernia; in the latter there is certainly a danger of including the cord with the neck of the sac in the ligature; moreover, in most cases of strangulated hernia we are anxious not to prolong the operation so as to add to the collapse; this is especially the case in private practice, when the operation has often to be performed on an inconvenient bed. So that although as a rule in instances of femoral strangulated hernia we should complete the operation by ligaturing the neck of the sac, in inguinal hernia, although it is most desirable to do so, nevertheless, if the herniotomy has been delayed and the patient is already suffering considerably from shock, we cannot safely prolong the operation by attempting the radical cure. On the other hand, if in strangulated inguinal hernia the patient's condition is good, after relieving the strangulation we should proceed to isolate the cord, and then the sac, ligaturing its neck in the manner presently to be described.

In femoral hernia, supposing the ring is unusually large, an attempt may be made to partially close it by passing sutures through Gimbernat's ligament and the deep crural arch at the upper and inner angle of the ring. In cases of inguinal hernia, after ligaturing the neck of the sac, the pillars of the ring should be brought together and tied, either by means of catgut or silver wire sutures. There can be no question that in instances of strangulated hernia, supposing the continued application of ice to the tumour together with the administration of opium fails to enable us to reduce the

hernia by taxis, the patient being under an anæsthetic, we should at once proceed to perform herniotomy. There can be no more fatal error than procrastination in cases of this kind; herniotomy is not a dangerous or even a formidable operation, but although the patient may appear to have no very urgent symptoms, operate, if you cannot after treatment such as that above referred to reduce the rupture. This point is well illustrated by the case of femoral hernia, the second on our list, for although the patient had some stercoraceous vomiting on the day of the operation she was cheerful and in but little pain. No fæces, however, passed per rectum, and she had a strangulated hernia, which after the application of ice and the administration of opium we failed to reduce under chloroform. On opening the sac we found the strangulated gut of a deep claret colour, and doubtless, had we delayed the operation, mortification of the intestine would rapidly have supervened. But if we commence an operation of this kind with the intention of ligaturing the neck of the sac we should be careful not to allow its fluid contents, after exposure to the atmosphere, to pass back into the abdomen. This may be prevented by incising the sac of the hernia freely, and pouring a weak solution of carbolic acid over its contents before we attempt to relieve the constriction which causes strangulation of the hernia. If omentum has to be dealt with it must be treated in the same way, and vessels carefully secured before it is returned into the abdomen, for we cannot drain this cavity after we have securely tied the neck of the sac.

Lastly, the treatment of congenital hernia by excising a portion of the sac commends itself to my mind. I have now operated on fifteen children in this way and the result so far has been satisfactory. The first of these little patients came under my care in 1882, after reading Dr. M'Leod's lecture on the subject in the 'Indian Medical Gazette,' and neither in this, nor in any of the other cases, so far as I am aware, has there been a recurrence of the hernia subsequent to the operation. The chief trouble we have to contend with in operating for the radical cure of hernia in children is the difficulty experienced in isolating the spermatic cord, or rather in separating it from its surroundings; it is in fact a

part of the wall of the sac. We must also expect to get a considerable amount of œdematous swelling in the scrotum and along the course of the inguinal canal after the operation. It is very troublesome among infants to employ perfect antiseptic dressings because they get soiled with the urine, and it is difficult to keep our little patients at rest in bed. But we are the less anxious about local inflammation in children; it seldom does much harm, and in many cases absolute good, by consolidating the tissues along the course of the inguinal canal, and so blocking the passage from the abdomen. I rather prefer, therefore, in children, after the operation to leave the wound exposed to the air without any dressings.

But then comes the question, are all congenital herniæ to be treated for the "radical cure;" if so, at what age should the operation be performed? With reference to the poorer class of patients it is almost impossible for them to procure the necessary trusses, which must be worn night and day if we are to cure a congenital hernia by means of instruments.

At the same time most of these patients must subsequently gain their living by hard labour, and it is the more necessary they should not be weighted in the struggle for life by a hernia. I think, therefore, we may lay it down as a rule that among persons who can afford neither time nor money to spend upon trusses for their infant children affected with a hernia, we should operate upon such children as soon as possible after they have done teething, although in not a few cases I have for special reasons operated on infants.

On the other hand, if a boy's parents are in a position to purchase proper trusses, so as to keep the rupture from coming down day and night, from infancy until the lad is about eight years of age, we should avoid an operation, for many of these cases get well. Supposing, however, that a boy has been carefully treated in this way, until he is, say, nine years of age, and still the congenital hernia exists, then I think it is better to operate. The proceeding at this age is not a hazardous one, for Mr. Banks has operated on thirty-six patients with one death, and that was a most exceptional, peculiar, and complicated case.

The operation for the radical cure of hernia consists, in first shaving the parts over the hernia, and carefully disinfecting

them, if antiseptic dressings are to be employed. I do not think it advisable to reduce the hernia until the sac has been exposed. An incision must be made, the upper margin of the external ring being taken as the centre of the incision, which is carried as far above as below this point. The aponeurosis of the external obliqui is exposed, and torsion applied to any bleeding vessels. As I recommend that the sac should be opened, there is no necessity to make an elaborate dissection of the various layers covering it; in fact, by doing so they are separated from surrounding tissues and are apt to slough. When the sac has been exposed, or we are close upon it, if the hernia is (A) reducible, its contents should be returned into the abdomen, and the sac may then be opened, the surgeon passing his finger into it, and up to the internal ring, so as to be certain that neither omentum nor intestine occupy the neck of the sac. Bleeding points should be carefully secured at this stage of the operation. The cord must be isolated and held in a pair of forceps. If the hernia is (B) irreducible, after opening the sac wash out its contents with a weak solution of carbolic acid, and having relieved the constriction return the contents of the sac into the abdomen. Secure all bleeding points. If there is omentum in the sac it may be passed into the abdomen, unless it is gangrenous or adherent to the neck of the sac, in which case it must be carefully tied either *en masse* or in small pieces according to its size; cut away the omentum beyond the ligature, and return the portion behind the ligature into the abdomen. Be careful to secure all bleeding points before the stump of omentum is returned into the peritoneal cavity.

Having opened the sac and examined its neck from within there is usually no great difficulty in taking up a fold of the sac and tearing it from the surrounding tissues; where necessary a little dissection must be employed. The sac is thus isolated up to its neck, the cord being held out of the way. The neck of the sac as it passes out of the internal ring forms a kind of pedicle and is to be transfixed by a needle armed with a strong double silk ligature. The neck may thus be tied in two pieces and there is no fear of the suture slipping even if catgut is preferred to a silk ligature.

That portion of the sac which has been separated from the surrounding structures should be removed; its attached portion may be left *in situ.*

The next step in the operation, if it be an inguinal hernia, is to bring the tendinous boundaries of the canal into close contact either by means of catgut or silver wire sutures. The conjoined tendon of the internal pillar and Poupart's ligament are brought into view. A curved needle is passed along the finger and made to transfix the internal pillar, the needle is then threaded and withdrawn and Poupart's ligament transfixed, the ligature is then withdrawn from the eye of the needle and the latter removed, so that the ligature when drawn tightly together closes the abdominal ring. If the ring be very large more than one ligature must be employed in this way to close it. As I said before, strong catgut ligature is the best substance we can employ to bring the pillars of the ring together. A drainage-tube should be laid in the wound, and its edges brought together with silver wire sutures.

There is no necessity to enter into details regarding the further dressings, but in most cases we must expect to have a considerable amount of swelling of the scrotum and along the inguinal canal, which at first may give rise to the impression that the hernia has recurred. After a fortnight or three weeks the swelling begins to disappear, and the wound gradually cicatrises and heals. In adults a light truss should be worn for some years after the operation, and in children, after being operated on for congenital hernia, it is right to order a truss to be worn for some years.

A COMMENTARY

ON

ONE HUNDRED AND FIVE CASES OF CHOREA.

By Dr. DONKIN.

Although I have but little that is new to say on the many interesting questions involved in a study of chorea I venture to think that there is sufficient reason for publishing this contribution to the subject, both on account of the widely divergent opinions still held as to the nature and origin of this disorder, and from the fact that the cases on which I base my remarks have all been under my own care as in-patients either at the East London Hospital for Children or at Westminster.

The importance no less than the vexed nature of the question of the ætiology of chorea was strikingly shown by its being chosen for discussion at the International Medical Congress held in London in 1881, and by the widely different conclusions held by the authors of the two most prominent papers on the subject—Dr. Sturges and Dr. Stephen Mackenzie.

That all my cases have been drawn from in-patients under my own care may be considered by some a drawback,

as there is always a danger of personal bias colouring such an inquiry, the inevitable hypothesis, without which it is almost impossible to investigate anything fruitfully, being never absent from the single observer's mind. I can only say in answer that I have endeavoured, after the example of Dr. Sturges, who has written so ably and fully on this matter, to deal with such facts as have come before me as fairly as possible; though it was not very long after I had seen some hundreds of cases of chorea in out-patient practice that I came to a provisional conclusion that the prevailing teaching on the nature of the affection was quite inadequate to explain it rationally, and that rheumatism played only a small and subordinate part in its causation. The essays of Dr. Sturges then came before me,—equal, I venture to say, to any medical literature in scientific candour and logical force. His work seemed to be far in advance of any other, and his explanation to cover in a way hitherto unattempted the multifarious facts which present themselves to the clinical student of this disorder. My own further study was mainly inspired by Dr. Sturges' writings, and has in almost every particular confirmed his views which set forth chorea as mainly a functional disorder of development in early life. If I have succeeded in avoiding the evil consequences of bias, as I have striven to do, I may contend that there are advantages arising from continuous observation in the wards under the guidance of one inquirer, both in the better acquisition of the history of the cases reported—the questions being asked according to a system—and, in this instance especially, in the *repeated* examination of the heart, a proceeding which throws no small light on certain important points, and a note of which generally finds no place in the lists of cases collected from the wards of several observers.

The main points I shall refer to in the following analysis and comments are (1) the relation between chorea and rheumatism, (2) the nervous antecedents and relationships of chorea, and (3) the heart disturbance in chorea.

I would point out that the cases analysed have been taken consecutively from my note-books without the omission of any, the earliest dating from the year 1877. The imperfect taking of some of the cases and the hasty observation of others,

owing either to negligence or to the premature withdrawal of the child from the hospital by the parents, have rendered it impossible to utilise all the cases for the consideration of all the points above named. In the analysis, therefore, I shall refer on each separate point only to that number of cases out of the whole in which the particular inquiry or observation was made.

All the cases treated of here were under the age of fourteen.

There were seventy-four girls and thirty-one boys.

The average duration of the choreic movements, from the time of first notice to disappearance, was a little under eleven weeks in that very large majority which recovered completely. Three cases were chronic, having lasted from one to two years; but two of these recovered after a few weeks in hospital. A few were unchanged by any conditions of treatment. After a careful trial in many cases of many drugs *usque ad nauseam* to myself and some of my patients, I have no hesitation in saying that on chorea *as such*, however useful some may *incidentally* be, none has any effect.

I. *Relationship of Chorea to Rheumatism.*

With regard to the relationship of chorea to rheumatism I can adduce all my cases but one, *i.e.*, 104, as a basis for the following analysis bearing on this point; the remaining case being imperfectly taken.

1. In sixty-six cases I have been able to satisfy myself that no affection which could possibly be called rheumatism in the vaguest sense occurred at any time in their history, either before or after chorea.

2. In twenty-four cases there is a clear history of what may be called rheumatism, *i.e.* a definite though often slight degree of joint swelling and pain, occurring at some period previously to the first attack of chorea. In fifteen of these the onset of the rheumatism either immediately preceded the choreic movements, or by so slight an interval of time that the chorea may be regarded as a direct sequela of the rheumatic attack. Of the rest, three cases had the chorea

under one month after recovery from the rheumatism, and six at periods varying from three months to two years.

Of these last six cases, three were *immediately* preceded by a definite "fright" or an event which would bring them as fairly as any case of chorea under the category of psychical causation, had I not felt bound, in order to avoid the suspicion of bias as far as possible, to class them at present in the list I have called rheumatic. The "frights" in these cases were "a severe beating," an "attack by a cat," and "being thrown down by a drunken man."

It thus appears that a majority of these cases of chorea which had been preceded by rheumatism had been very closely connected in time with that rheumatism, so closely indeed that it is impossible not to regard the rheumatism as an important link in the chain of causation, or, in familiar medical language, the "exciting" cause. Just in proportion, moreover, as the rheumatism in the history of a choreic patient is of ancient date, so it would seem from these cases we must look elsewhere for the exciting cause of the chorea; and, as we have seen, of six such cases, three are found to contain satisfactory evidence of what most admit to be at least a very frequent precursor of the affection under consideration. I have many more such cases in my mind, out of the several hundreds that I have seen in past years in out-patient practice at different institutions, when, owing to having been prominently taught the rheumatic theory of chorea, I was particularly careful to inquire into the rheumatic history; and the very frequent occurrence, spontaneously related to me, of some nervous disturbance immediately ushering in the chorea of children who had had rheumatism some indefinite time previously was one of the points which struck me forcibly and led to the inquiry of which this paper is the result.

3. The remaining fourteen cases I may class as doubtful in their rheumatic relationship, some having had acute rheumatism at an indefinite time *after* chorea, or during or before a *second* attack; and others having suffered at some time, and occasionally a short time, before the movements were noticed, from slight pains in the limbs, such as Dr. Sturges has well called vague pains, without any fever, or

swelling or redness of joints. It is in this class of cases that it is especially difficult to avoid the bias which must always be guarded against in inquiries of this kind, and of which but few writers on this subject can be entirely acquitted. Three of these fourteen cases had acute rheumatism either immediately before or during a second attack of chorea, the first attack having certainly not been preceded by anything in the history which could have been called rheumatism; and one case had acute rheumatism two years after a single attack of chorea. Two others had their chorea soon after an illness which was said to be scarlet fever, but which might have been rheumatism. To be as fair as possible I would place all these six cases to the rheumatic account in my final summing up of the probable conclusions from my cases, regarding rheumatic relationships of chorea. But, on the other hand, we have eight of the so-called doubtful cases to deal with, in which the vague pains occurred. Had it not been for the habit of some writers to class such pains as "probably rheumatic," I should unhesitatingly, with Dr. Sturges, from my experience and study of these cases, refer them to that category with which rheumatism has nothing whatever to do.

4. My final conclusion as to probabilities from these 104 cases is therefore as follows:

I would add to the sixty-six cases of the obviously non-rheumatic class the eight of vague pains from the "doubtful" class, and the three cases of rheumatism of a recent date with adequate and definite and immediate nervous causes, that I have quoted above; and I would place to the rheumatic account the whole of the remaining six cases from the "doubtful" list: cases that, most of them having had true rheumatism after chorea, might have had it previously in its so-called latent form without its being recorded.

This computation, in which mere opinion plays but a very small part, and by which at least ten and probably more cases are given to the rheumatic list on very small grounds, shows that out of 104 consecutive cases of chorea, seventy-seven are probably quite unconnected causally with rheumatism; while of the remaining twenty-seven in whose previous history rheumatism probably occurs, at least fifteen

seemed to be immediately caused or excited by the rheumatism itself.

Rheumatism, therefore, in these choreic children, whose cases I have given, may be said to have been the exciting cause of the chorea in about one seventh of the number; while in about three-fourths it plays no part at all in the conditions which give rise to the movements.

Closely bearing on the question as to how far previous rheumatism has any connection with chorea in cases where the latter disorder is distant in time from the former, is the consideration of the normal incidence of rheumatism in children, taken at random, who are not choreic. This has been shown by Dr. Coutts, of the East London Hospital for Children, in an inquiry undertaken at the suggestion of Dr. Sturges, to be at least in the proportion of 15 per cent., and in considerably over this proportion if children who had joint pains only, without swelling, are to be included. The details of this careful inquiry were published in the 'Lancet' for Sept. 20th, 1884. The notion of any great special proclivity to rheumatism in choreic children is thus seen to be founded on a smaller basis of fact than is generally believed in England.

5. I may dismiss the question of *family rheumatism*, as bearing on the matter under discussion, in a very few words. Dr. Sturges said almost the last word on the subject, when he pointed out that it is almost impossible to get accurate statistics as to the occurrence of family rheumatism; that we do not know the normal amount of rheumatism in the population, and further, that "if rheumatic parents transmit their morbid peculiarities to their children they may be trusted to transmit, first of all, a liability to rheumatism," hereditary as it is admitted to be.

I would add that, from inquiry into this subject, I have found that about 18 per cent. of *general hospital* patients, men and women, taken at random, have had definite acute rheumatism some time in their lives; and, on the other hand, that out of my 105 cases, in almost all of which the inquiry was made, there appears to be a probable history of acute rheumatism in either father, mother, uncle, aunt, brother, or sister, in twenty-two; but in only five out of the

twenty-four cases of chorea which had certainly had acute rheumatism some time in their lives, was there a history of any rheumatism whatever in the family. The introduction of the question of family rheumatism into the discussion seems to me to be a last resort of those who will defend the rheumatic theory at all hazards, forgetting that that theory was originally based exclusively on grounds which could only relate to rheumatism in the choreic themselves.

In concluding my remarks on the relationship of chorea to rheumatism, without any regard at present to the question of heart disturbance and murmurs—to be treated afterwards —I would observe that the proportion of non-rheumatic cases given above agrees substantially with that stated by Dr. Sturges and most other observers who are neither somewhat vague in their notion of rheumatism, nor complicate unduly, and therefore confuse, their consideration of alleged rheumatism with that of heart disturbance. But in my cases, perhaps all too few for any definite conclusion to be drawn as to the nature of the nexus between the rheumatism and the chorea, when these affections coexist or are closely connected, I find a much larger proportion than Dr. Sturges does of instances where the chorea seems to grow immediately out of the rheumatism; Dr. Sturges giving from 5 to 8 per cent., while my list shows at least 15 per cent. I cannot help thinking, however, that, according to Dr. Sturges's own contention, *pain*, being admittedly an exciting cause of chorea, might go far to explain this class of cases; that it is, in fact, this nervous element of pain in rheumatism; not to mention the at present hypothetical, but not altogether improbable, view of other nervous alliances of rheumatism, which may serve to illustrate the causal link that seems undoubtedly to exist in a minority of cases between these two affections. I may mention here as well a point which I hope to work out at some future time, viz. that it has seemed to me in noticing the distribution of choreic movements at their onset, that it is in the rheumatic cases where the joint affection has been general, that generally distributed initial movements are most frequently observed; and, moreover, that it is in rheumatic cases especially that *early* movements in the legs, comparatively

rare in ordinary nervous chorea, are most often seen ; the legs but infrequently escaping some affection in rheumatic attacks.

II. *The Nervous Antecedents and Relationships of Chorea.*

It is generally admitted that in a considerable proportion of cases some psychical event, such as fright, or pain, or other emotional disturbance, is an exciting cause of chorea. It is necessary to be careful and explicit in noting such causes, or we may be led into very slipshod reasoning owing to the common occurrence of such possible excitants in the life of every child. In the list of cases which may certainly be placed in this category, I shall be careful to count those only where the chorea set in immediately after the alleged fright, and shall mainly confine this class of cases to those where the nature of the emotional excitant was stated.

Twenty-six of the whole number of cases began very soon —generally either a day or two, often much sooner—after the occurrences enumerated below, three more setting in immediately after what was called a "severe fright" but not specified; making twenty-nine in all which may be set down fairly to the psychical or emotional account, as arising *directly* from nervous disturbance.

CASE 1.—Hit by a pair of tongs and much hurt (movements same day).
2.—Fell into lake at Crystal Palace (very excitable and fidgety just after; movements first noticed two to three weeks afterwards).
3.—Frightened by burglars in house (next morning).
4.—A fall (same day).
5.—A beating at school (same day).
6.—Thrown down in the street, æt. 6 (immediately).
7.—Struck severely on hand by schoolmaster (same day).
8.—Clothes caught fire (a few hours).
9.—Finding grandmother dead in same bed (immediately).
10.—Falling into tank of water (very soon).
11.—Knocked down by a cab (1 week after).
12.—Trod on a cat; much alarmed (same day).
13.—"Seeing a ghost" and his grandmother go into hysterics at the time (a few hours).
14.—Great excitement at play (immediately. This patient had a previous attack after a fright. Insanity in family).
15.—Much frightened by a drunken man (a few days).

16.—Severe pain in head and sickness (immediately).
17.—Threatened with "gypsies" one night by a woman (next morning).
18.—Severe scald on chest (immediately).
19.—Great excitement on an excursion in very hot weather (next day).
20.—Startled by father in dark and fainting (immediately).
21.—Saw a boy run over and killed (soon after).
22.—Nearly run over by a cart (immediately).
23.—Much frightened by a thunderstorm (immediately).
24.—Severe headache and epigastric pain (immediately).
25.—Frightened by a drunken man (immediately).
26.—Beating at school (immediately).

At least twenty more out of the 105 cases were spontaneously stated to be exceptionally "nervous and excitable" children.

A few instances may be given in this context of the nervous family relationships of some of these choreic children. One patient had a sister who had been choreic three times; another had an epileptic father; a third had both parents "hysterical," and a fourth a father in an asylum. "Hysterical family," "whole family very nervous," "father insane," "father epileptic," "father hysterical and two aunts choreic," "sister had chorea four times," "grandfather insane, mother hysterical," "sister choreic," "father very nervous, mother hysterical, brother epileptic," "brother and sister choreic," "grandfather and grandmother epileptic," "mother had chorea," "sister choreic," "aunt choreic," are notes appended to fourteen other cases, making eighteen cases where a tolerably definite account of marked nervous disturbance in the family can be established.

There are several cases also, not included in the above enumerations, where the chorea is stated to have come on after "a fright," or having been much scolded by its parents, or overworked or excited at school. But here we approach vague ground; and no statistical accounts can be drawn from such allegations as these. Yet it may be contended that even this latter class of cases is not much more vague than that of the "wandering pains" which is claimed by some writers as properly referable to the category of rheumatism. To keep within sober and definite limits I can affirm after a careful consideration of my noted cases that at least fifty out of the whole number were so markedly

nervous that their symptoms would probably have attracted attention had they never suffered from chorea; and we have seen that twenty-nine began to exhibit movements in close connection with some definite excitement of their nervous system. The family histories, too, will be admitted to be on the whole somewhat remarkable for nervous abnormalities.

Analgesia of limited extent has been noted by several writers on chorea. This is certainly not common in the chorea of childhood, but is seen more often at the age when other hysterical phenomena tend to make their appearance. The various mental disturbances, too, which frequently accompany chorea in more advanced years, have been unduly dwelt on as "choreic" phenomena by authors who have not taken their data in sufficient proportion from the truest pattern of the disease, as it shows itself in children. I have noted varying analgesia in many cases of girls over the age of puberty; but only three times in the collection of cases I am now discussing, in all confined to the arms, which were chiefly concerned in the movements. This point, however, was not inquired into in more than about half of these cases. The analgesia in the three cases alluded to was complete for a time, the ages of the patients, all girls, being twelve, ten, and three years respectively. In the ten-year old case there were other marked hysterical phenomena; rhythmical tremor of the right arm, exactly of the pattern seen in insular sclerosis, contracture of the right knee-joint, and great excitability. These phenomena all disappeared together with the movements. This child was sexually precocious, and had the manners of many senior hysterics. She had distinguished herself at school recitations, and had danced in public.

Choreic paralysis in a marked degree is also rare in childhood. In a slight degree, and a transitory form, it occurred in ten cases. In three only it was prominent: one case showing it only in the right arm, the other two, a boy and a girl, being completely without power of voluntary motion, including that of the head, for one and two weeks respectively after the subsidence of the choreic movements. The worst case was that of the boy who wasted to an

excessive extent and had bedsores. Both these patients were apparently fatuous, but quite recovered.

The frequency of *somnambulism* and *night-terrors* in choreic children I regret to say I have not systematically inquired into. I find two cases of such noted, and another in which both phenomena were very prominent. None of my patients showed these symptoms while in hospital; and here it may be remarked in passing that very little is heard of these affections in children's hospitals, a point which has an important bearing on the question of the dietetic and nervous elements in the causation of at least the latter disorder. The régime of a well-nursed hospital is eminently favorable to most nervous children.

The occurrence of repeated *convulsions* in infancy does not appear with any prominence in the histories of my cases, being noted only four times; and in this context it may be remarked that signs of previous rickets in choreics are notable by their absence. Epilepsy occurred in two cases in an unequivocal form, one of them suffering from it while in hospital.

Incontinence of urine was remarked in four cases during their stay in hospital, not counting the two well-marked instances of choreic paralysis mentioned above.

Before leaving the subject of the nervous antecedents and relationships of chorea, I would quote from my note-books the number of cases which appeared, or were stated, to have begun in close connection with *over-work or worry at school.* All vague allegations on this head are omitted. This point was not specially inquired into except in a very few instances; and nearly all the cases were noted before the recent "over-pressure" controversy. The cases are as follows, nine in all: "Working hard for examination," "ditto," "worry about examination," "works very hard at school," "much worry at lessons," "much study," "can't be kept away from books," "much writing and work," "excessive work and excitement at school." I have included none of these in my list of cases due to definite nervous causes, and only one of these nine appears in the large class of those stated by the parents to be exceptionally nervous and excitable. Should this antecedent to chorea be regarded in a causative

light the number of my cases in which some definite nervous cause can be assigned would amount to thirty-eight.

In forty-one cases no cause was suspected or alleged by the parents: several of these being in the rheumatic category already dealt with, and many in the "nervous and excitable" list. The remaining twenty-six cases were vaguely referred to some excitement or fright by the parents; but generally of so indefinite a nature, or so distant in time, that no stress can be laid on it.

The theory of nervous disturbance being granted as a *vera causa* of chorea, that is to say, being admitted as at least covering the facts of this disorder, it will be seen that should such nervous disturbance be proved to exist in most cases of chorea, the plea for its being regarded as, to a great extent, explanatory is established. And in proportion as the probability of antecedent nervous disturbance is made out, so the validity of the hypothesis becomes more and more evident. No one has shown with such ability and minuteness as Dr. Sturges how much further the theory of functional nervous disorder goes to explain the varied phenomena and relationships of chorea than any other hypothesis hitherto started. Such being the case, it is in no way stretching the point to urge once more the likelihood or rather the inevitableness of many causes of nervous disturbance in childhood being overlooked. We have only to remember the apparently trifling events which so seriously affect young children, and the unstable condition of their developing nervous systems, to see at once how important a bearing this contention has upon the question of the causation of chorea.

III. *The Heart Disturbance of Chorea.*

Heart murmurs, modified sounds, irregular action, and vegetations on the valves in patients dying with chorea, are all phenomena of sufficient frequency to demand attention when the ætiology of this disorder is under discussion.

The cardiac murmur so often heard in chorea has been inextricably involved by many writers in the question of the

rheumatic causation of the disease. The presence of the murmur has been taken by some to be sufficient evidence of endocarditis, and this notion has been supported by the frequent occurrence of valvular vegetations in cases which chance to die. There being evidence also of such vegetations in certain instances where no murmur has been heard during life, the frequency of "heart disease" in chorea has been still further suspected, and thus the rheumatic theory has been incidentally much strengthened. The whole question is a confessedly difficult one to deal with satisfactorily.

It has been too lightly assumed by several authors that cardiac murmurs *per se* in chorea mean heart disease, and but few attempts have been made to study the nature and persistence of the heart disorders in the rheumatic and non-rheumatic classes of cases respectively. In Dr. Stephen Mackenzie's paper, read at the International Medical Congress in 1881, this subject is discussed at some length. He gives the various percentages of heart murmurs in the rheumatic and non-rheumatic cases, the murmur being much less frequent in the latter; and he also furnishes a statement of the examination of thirty-three cases of chorea with heart murmurs while in hospital, at periods from one to five years subsequent to their discharge. But in few of these cases is any stress laid on cardiac physical signs other than the murmur; and in the last class, where an after-examination took place, it is not stated what proportion of them were rheumatic in origin or rather, to use the author's language, occurred in cases where there was a previous history of rheumatism. The cardiac affection, in short, is tacitly assumed to be of the same nature in all, and for reasons which are stated at length, the conclusion is come to that "rheumatism is in nearly all cases the cause of the heart murmur which so frequently attends chorea," though out of the 172 cases of chorea given 70 are said to be without any history of rheumatism.

My endeavour now will be to show what, if anything, my cases may teach as to the relationship of heart disturbance to chorea. One very important method of observation, viz. the examination of the heart at some lengthened period after recovery from chorea, I have been unable as yet to carry out

extensively; at some future time I hope to give further records on this point. The importance of such observations is obvious, and must have been impressed upon all who have read the invaluable work of Dr. Goodhart's on diseases of children, where he states that it is "conclusively established that the issue of chorea, as regards the heart, is in no small number of cases organic disease." This, I venture to think, is one of the very few questionable statements in a book whose distinguishing mark is a rare and remarkable fidelity to nature, nor is Dr. Goodhart, in my opinion, sufficiently explicit in this context as to what is meant by "permanent cardiac disease."

Ninety-nine of my 105 cases are available for the study of this question, but only a small part of them for the report of the examination at any considerable period after the patient's discharge. In most cases, however, I have notes of the state of the heart at the time of discharge. Of this whole number fifty-five had murmurs, nearly always apical, at some time while under observation; eleven had other cardiac derangements, such as reduplicated or prolonged sounds, marked irregular action, &c.; and thirty-three either had hearts in every way normal as far as physical examination went or were imperfectly examined. Of ten of these cases, I think, from the internal evidence of the note-books, that more careful observation would have placed some in the same category with the eleven above mentioned. Of the fifty-five cases with murmurs twenty-two had had rheumatism some time in their lives. Of the thirty-three with no obvious heart disturbance only five had had rheumatism. Of the eleven with cardiac disorder without murmur none had had rheumatism.

This gives a percentage of apparently normal hearts in non-rheumatic cases of about 39 as opposed to 18·5 in rheumatic cases; the heart, that is, seems to have escaped in my cases of non-rheumatic chorea more than twice as often as in cases in whose history rheumatism occurs, always excepting the minor cardiac disturbances which may in some instances have been passed over.

Nature and Persistence of Murmurs, &c., in the Twenty-two Cases where Rheumatism Occurred.

In sixteen of these there was well-marked mitral disease as evidenced not only by the murmur but also by marked accentuation of the pulmonary sound, and in some cases by cardiac enlargement or by cardiac symptoms. In all these the murmur was persistent, and, with the unlikely exception of one not finally noted, present on discharge when the chorea had disappeared. Three of them were seen at intervals of two months, nine months, and two years respectively after discharge, and the state of the heart was found to be either the same or worse. Out of these sixteen cases five had well-marked physical signs of mitral constriction and regurgitation, the rest of mitral regurgitation only. The remaining six cases I give more in detail. The first had no murmur on admission, then a varying soft systolic murmur at apex, and none on discharge. The second had a systolic murmur at apex, frequently appearing and disappearing; none on discharge. The third had a similar murmur, but there is no note as to discharge. The fourth had a soft systolic murmur at base and apex which were only just audible on discharge. The fifth and sixth a soft systolic murmur at apex, the one disappearing entirely, the other being very faint, on discharge. In none of these six cases was there any evidence while under observation of any mitral mischief other than the murmurs alluded to, or any cardiac symptoms.

It will be seen from this short summary that a large majority of the bruits heard in the choreic cases which had had rheumatism were permanent and denoted unquestionable cardiac disease. And on the other hand, out of the remaining six three certainly had no evidence of cardiac disturbance on discharge; it being at least *probable* that the same might be said of the rest.

Nature and Persistence of Murmurs, &c., in the Thirty-three Cases with no History of Rheumatism.

The question involved here being of special importance, I subjoin a somewhat detailed list of the cases to be considered.

Murmurs.	State, on discharge, of (1) movements and (2) murmurs.
CASE 1.—Syst. apex very variable, and often alternating with doubling of 1st sound; 2nd sound sometimes double .	(1) None. (2) Same.
2.—1st sound prolonged; afterwards syst. apex; 2nd sound double	(1) None. (2) None.
3.—Syst. apex, alternating with double 1st sound . .	(1) None. (2) Not noted.
4.—Syst. apex	(1) Slight. (2) Still heard.
5.—At first none, then double 1st sound, then syst. apex and double 2nd . . .	(1) None. (2) None.
6.—Syst. apex	(1) None. (2) None.
7.—At first both sounds double, then syst. apex . . .	(1) Slight. (2) Still heard faintly.
8.—Occasional syst. apex . .	(1) None. (2) None.
9.—Syst. apex; 2nd sound double	(1) None. (2) None.
10.—Syst. apex	(1) None. (2) Not noted.
11.—Syst. apex, then both sounds double	(1) None. (2) None.
12.—Syst. apex and base . .	(1) None. (2) None, and one month after, do.
13.—Syst. apex	(1) Not improved. (2) Still heard.
14.—Syst. apex (very loud) . .	(1) None. (2) None, and four months after, do.
15.—Syst. apex	(1) Not improved. (2) Still heard.
16.—Syst. apex	(1) Not improved. (2) Still heard.
17.—Syst. apex (with two attacks at three years' interval) .	(1) None. (2) None (both times).
18.—Syst. apex, then syst. base as well	(1) None. (2) Basic only remained.
19.—Syst. apex (loud) . . .	(1) Ended in death. (2) Persistent. (P.M.—All valves healthy.)
20.—Syst. apex	(1) None. (2) Still heard.
21.—Syst. apex	(1) Slight. (2) Just audible.
22.—Syst. base	(1) None. (2) None.
23.—Syst. apex	(1) Slight. (2) Still heard.
24.—Syst. apex, loud . . .	(1) Slight. (2) Still heard.
25.—Syst. apex, occasional . .	(1) None. (2) Not noted.
26.—Syst. apex	(1) None. (2) Just audible.
27.—Syst. apex	(1) Slight. (2) Not noted.
28.—Syst. apex and base . .	(1) None. (2) None.
29.—Syst. apex	(1) None. (2) None.
30.—Syst. apex	(1) None. (2) Not noted.
31.—Syst. apex	(1) None. (2) None.
32.—Syst. apex	(1) None. (2) None.
33.—None at first, then syst. apex	(1) None. (2) Still heard.

It will be seen from the above list that out of twenty-eight cases which are noted on discharge fourteen had no murmur on leaving the hospital well from chorea; and that two of these were examined respectively at one month and four months after discharge, and found free from murmur or other cardiac disturbance. In such cases as this a very careful examination was always made. Another of these cases was in the hospital twice, the murmur disappearing each time with recovery. Of the remaining fourteen, one died (with systolic apex murmur, and *perfectly healthy structure of the mitral valve*), and thirteen had murmurs more or less audible on discharge. Of these thirteen five only were discharged well; in one of them the murmur was basic only; five were discharged "nearly well," and three were discharged with little or no improvement.

Out of the thirty-three cases, the murmur was apical in thirty, basic in one, and both in two, and in nine of them the murmurs are noted as alternating with doubled sounds (first or second), or attended by doubled second sounds, or as being variable in character and subject to disappearance.

In none of these cases was any evidence of cardiac disease observed. As far as the examination of the heart is concerned, all but nine of this class of presumably non-rheumatic cases were free from all heart disturbance on discharge well from their chorea, only four of these nine being known to have an apical murmur; the remaining five being those where the cardiac condition on discharge was not noted.

It remains to consider shortly the eleven cases which had neither rheumatism in the history nor cardiac murmur. Of these three had marked irregular action of heart; seven had marked reduplication of one or both of the cardiac sounds, and one a very prolonged first sound at apex. Of three of these eleven cases I have no note as to the condition of the heart on discharge, but the absence of note in at least two of these cases *probably* means that the abnormality had disappeared. In five cases the heart is noted as normal on discharge; in the remaining three the abnormality (consisting of reduplicated sounds in two cases, and irregularity in the third) persisted in a modified degree and was noted on discharge.

It would appear, therefore, from all these cases, few though they are, that without unduly stretching a point, a fairly well-marked distinction can be observed between the cardiac phenomena which accompany chorea as such, and those which are closely related to rheumatism. If it could be established by further observation that, as my series of cases seem to show, the proper choreic murmur is as a rule not persistent, and that in the majority of choreas cardiac abnormalities tend to disappear either before, with, or soon after the movements, the question of how far a murmur indicates organic disease and how far it may imply previous rheumatism, is much simplified.

Of my ninety-nine cases sixty-six showed either murmur or modification of heart sounds or action. The cardiac phenomena of these cases may be divided, I think, into two great classes. (1) Those which were marked by obviously permanent physical signs and denoted organic disease, sixteen in number, all clearly rheumatic in origin. (2) Those which had no corroborative sign of cardiac disease, including six cases which had had rheumatism. Of this class, fifty in number, twenty-two were free from all cardiac derangement on discharge well; nine were not noted on discharge (but may in most cases be fairly put down to the "free" account); eight were discharged partially or not at all improved, with their cardiac derangement still noted in some degree; one died, with evidence of *healthy* structure of the mitral valve, and ten left the hospital free from obvious movements but still showing some cardiac abnormality. The noted signs of these ten were as follows:—One had a basic murmur only, one basic and apical, three systolic apex murmur, two systolic apex alternating with reduplicated sounds, two reduplicated sounds, and one irregular action of heart.

Bearing in mind these results in combination with the freedom from all apparent cardiac disorder in at least twenty, if not more, additional cases, taken from the category of "normal hearts," we find only ten cases out of eighty-six supporting in any degree, and that a very doubtful one, even in the three cases of apex murmur, the conclusion that chorea leads to heart disease. From observation of many

other cases, apart from this inquiry, I would endorse the teaching that whatever the exact mechanism may be of the cardiac murmurs and irregularities that so frequently attend chorea—a subject which cannot be entered into here—permanent organic heart disease but rarely, if ever, follows on chorea as such.

The frequent appearance of small valvular vegetations post-mortem in cases which die has been discussed by many writers. I agree with Dr. Sturges that it is not inconsistent with the views expressed above. Frequent, again, as it may be, it is not universal. I have myself seen three cases, two of which I had carefully examined during life, which showed perfectly healthy mitral valves post-mortem, though a well-marked systolic murmur had been heard in two, and probably in all three, for some time previously. There was no history of rheumatism in any.

Dr. Wilks in his lectures on "Nervous Diseases" has remarked that the question of the nature and relations of the heart affection of chorea might be in part solved by the observation of a hundred cases of chorea accompanied by a systolic bruit, and the discovery whether the bruit persisted or not as the choreic movements subsided. If, he says, the bruit accompanied the disease and departed with it, it could scarcely be regarded as due to organic change. The series of observations which I have detailed, though not of sufficient magnitude to comply with Dr. Wilks's terms, goes some way, I think, in the direction of showing that choreic murmurs and other cardiac derangements apart from rheumatism are in some way part and parcel of the general disorder, and largely tend to disappear with it.

There are several other points of interest which I could extract from my tabulated cases did space allow. I would shortly mention only three points in conclusion, some of which at least I hope, with the question of treatment, to touch upon at some other opportunity as bearing on the nervous alliances of chorea.

1. *The relationship of chorea to previous whooping-cough*—a point of some interest in view of the opinions again put forth by Dr. Sturges in his recent very interesting lectures at the Great Ormond Street Hospital, and published in the

'Medical Times' for June and July of this year, regarding the nervous origin of whooping-cough.

Out of eighty-one cases of chorea in which the occurrence of previous whooping-cough was inquired into, sixty-four had had this disease, and ten had escaped it. Of the rest the information was doubtful. Thus it appears that nearly five sixths of the choreics had had whooping-cough; a proportion very similar to that given by Dr. Sturges. On the other hand, it would appear from Dr. Sturges' statistics that out of 360 cases of non-choreic children taken at random only three fifths had suffered from whooping-cough; tending to show that whooping-cough has rather more than double the frequence in choreic children than in others.

2. *The great disproportionate incidence of chorea in the poorer classes, and its rarity in certain places.*—There is abundant evidence for this fact, especially in the chorea of children, the true pattern of the disorder. This was alluded to especially by Dr. Steffen, of Stettin, at the London Medical Congress; and he added that he seldom met with rheumatism in his cases. Dr. Ranke, of Munich, stated at the same time that out of 40,723 children seen as out-patients he had met with but nineteen cases of chorea, one only being rheumatic.

3. *The mode of origin and distribution of the choreic movements.*—The facts here are many which point to the developing brain of the child being the seat of the choreic disturbance. This point, on which I have several interesting notes, may be the subject of a future paper. I would only remark here that whether we couch our explanatory comments in the simple language used by Dr. Sturges, or in the more technical phraseology of the Spencerian school of psycho-physiologists, we come to the same result. It would not be difficult, I think, to adequately express the functional theory of chorea so fully put forward by Dr. Sturges in the terms of the evolutional and dissolutional neurology of Spencer and Dr. Hughlings Jackson. Whether this or that terminology would appeal to the student as more suited for explaining the phenomena depends mainly on his own mental constitution. Each method of expression has an advantage of its own; but it is certainly desirable

that, whenever possible, neurological phenomena should be discussed in the terms of the best accredited contemporary science.

P.S. For much help in the course of observation of these cases I have to thank the resident medical officers and several clinical assistants with whom I have worked at both hospitals. Especially I would mention, with much gratitude, Dr. T. E. Hayward (now of Haydock, Lancashire), formerly house physician at Westminster, and resident medical officer at the East London Hospital for Children, and Mr. J. Scott-Battams, the present resident medical officer at the latter hospital, as having given me the advantage of their close observation and criticism of many of the cases, and having checked, in a large number of instances, the recorded examinations of the heart. To Messrs. Granville Barker and H. Parker, formerly clinical assistants at the Hospital for Children, and Mr. W. A. Wills, now house physician at Westminster, I am also indebted for aid in the collection of cases from note-books.

NOTES ON THE LAMSON CASE.

By Dr. DUPRÉ.

Although some years have elapsed since the trial of Dr. Lamson took place I make no apology for bringing the case forward once more, particularly as there are some questions connected with it which have not yet, in my opinion, been sufficiently considered. Before doing so it may, however, be well to state that although the work to be recorded was, in a great measure, done in conjunction with Dr. Stevenson, the writer alone must be held responsible for any statement made in the following pages, just as Dr. Stevenson must be held solely responsible for the paper on Dr. Lamson's case which appeared in the 'Guy's Hospital Reports' for 1883.

Percy Malcolm John died on the evening of December 3rd, 1881, having survived the taking of a capsule given him by Dr. Lamson, and in which there can be no doubt the fatal dose of poison was contained, about four hours. The post-mortem examination was made by Mr. Bond on December 6th, and the viscera, urine, vomit, &c., &c., were handed to me for provisional custody on December 7th. Previous to the post-mortem examination I had an interview with Mr. Bond, and as we both felt convinced that one of the more rarely used poisonous alkaloids had been employed we had decided that no unnecessary time should be lost in bringing the viscera &c., into a condition in which they might be preserved without detriment for future analysis. Accordingly, as soon

as I received the various articles I added to each, except the intestines, in which case it could not have been done without transferring them to a much bigger vessel, an amount of pure rectified spirit sufficient, in my opinion, to preserve them. At the time the spirit was added none of the viscera, &c., showed any signs of decomposition. Meanwhile the coroner had received directions from the Home Office, in accordance with which Mr. Bond handed the various articles to Dr. Stevenson, December 8th, with whom I was afterwards associated in the investigation.

At that time Mr. Bond had already stated his belief that Percy John had been poisoned by aconitine, but I did not then share his conviction. On December 10th I met Dr. Stevenson at Guy's Hospital to arrange method of analysis, and to divide the very numerous articles for separate analysis in our respective laboratories. As there could be little or no doubt that some poisonous alkaloid had been employed we in the first place directed our attention chiefly to the discovery of such a body, retaining sufficient of the viscera, &c., for further examination in case we failed in our first effort. The method employed for the extraction of the alkaloid was essentially that known as Stas's method, but inasmuch as some of the alkaloids are more or less readily decomposed by treatment with acids we slightly modified the usual proceeding, and extracted the various articles in the first place with pure spirit at the ordinary temperature, and followed this up by the usual extraction with spirit and tartaric acid at slightly elevated temperatures. The two alcoholic extracts were then separately evaporated at a temperature not exceeding 95° F., submitted separately to the purifying process, and the products only mixed when ready for extraction with ether, ether chloroform, &c.

Meanwhile I had taken to my laboratory, and examined, a variety of articles, among which were six large and fourteen small quinine powders, the latter numbered 7 to 20 both inclusive, two pills wrapped separately in tin foil, a number of coated pills, various sweets, sugar, &c. The two pills wrapped up in tin foil had been sent by Dr. Lamson to Percy John from America early in 1881. The six large quinine powders had been supplied by a chemist at Ventnor;

the supply of the fourteen smaller powders could not be traced with certainty. The police did not attach any importance to either the powders or pills and had only brought them because they were found among the things of Percy John. Dr. Stevenson and myself had looked at several of the powders, and they appeared to be ordinary quinine powders. Having the powders in my possession I judged it best, however, to submit each of them to a careful examination. This I accordingly did on December 15th, and the result fully compensated for the trouble involved. Each powder was first examined with the naked eye, after which it was carefully weighed, part of it examined under the microscope, and its solubility in water, reaction on test paper, and taste carefully noted. The six larger powders, which were the first examined, proved to be ordinary quinine powders of fairly uniform weight, varying only between 1·332 to 1·688 grains, with an average weight of 1·5 grains. The remaining fourteen powders were contained in much smaller papers different in character from the paper holding the six larger powders, less carefully folded and the powders themselves far more irregular in weight; they were numbered 7 to 20, both inclusive. The weights of these smaller powders ranged between 0·603 to 1·787 grains, with an average weight of nearly one grain. One powder after the other proved, however, to be ordinary quinine, and I more than once felt tempted to give up the further examination. On reaching the 16th powder (which was also the powder numbered 16) my attention was, however, arrested by the different appearance of part of the powder compared with the remainder; the powder, in place of being of uniform white colour, was partly fawn coloured; this colour might of course have been due to the partial use of unbleached quinine or to discolouration in keeping. Incidentally I may remark that it is advisable to conduct all such investigations by daylight, for when, a few hours later, I looked at the same powder by gaslight I could not perceive the slightest difference in tint between the different portions of the powder. The fawn-coloured portion showed under the microscope the presence of small amorphous particles, the aqueous extract was distinctly alkaline, and a minute portion placed on the tip of the tongue pro-

duced, after some minutes, the characteristic sensations of aconitine. Continuing the examination, two more powders, numbers 17 and 19, were found to contain a small admixture of the same fawn-coloured amorphous powder. I had therefore no longer any doubt in my mind that these powders represented another attempt made on the life of Percy John. The same evening I met Dr. Stevenson and informed him of my discovery, and on the following day I took the powders to Guy's Hospital, where Dr. Stevenson also tasted the powders, and agreed with me that they had been mixed, somewhat carelessly, with aconitine. Some days later, December 19th, we tasted, and otherwise tested, the two pills wrapped up in tin foil and came to the conclusion that they also contained aconitine. These conclusions, I may at once say, were fully confirmed by subsequent physiological experiments.

Subsequently the amount of aconitine contained in some of the powders and pills was estimated and found to be 0·83 grains in powder 16, total weight of powder 1·787 grains; 0·05 grains in powder 17, total weight of powder 0·878 grains; 0·452 grains in one of the pills; total weight of pill 2·71 grains; the rest was chiefly quinine with a little starch. No aconitine was found in any of the other pills or in any of the other articles. Powder 19 contained a minute trace only, and the second pill of the pair wrapped up in tin foil was used up in trying to find a method for the separation of the aconitine. After several trials it was found that the aconitine could best be separated from the disulphate of quinine, which for the sake of brevity I have called quinine in the preceding remarks, by means of chloroform in which the aconitine is readily soluble, while the disulphate of quinine is but very sparingly soluble (5 cubic centimetres of chloroform were found to dissolve 0·031 grains disulphate of quinine).

After these discoveries the work in connection with the extracts of the various viscera, &c., of Percy John became, comparatively speaking, easy. We soon found that each of these extracts produced on the tongue the strongly-marked and highly characteristic sensation of aconitine; each contained an alkaloid (two of them contained minute traces of

morphia, not nearly sufficient to account for all the alkaloid undoubtedly present), which gave no characteristic colour test with the usual reagents, and when injected under the skin of mice produced fatal poisoning under symptoms undistinguishable from those produced by Morson's aconitine. These facts led me irresistibly to the conclusion that Percy John had been poisoned by aconitine, and, judging from the quantity found in the urine, I had no doubt that the whole of the two grains bought by Dr. Lamson from Allen and Hanbury had been administered in one dose in the fatal capsule.

To sum up, the following are the reasons which left no doubt on my mind that Percy John had been poisoned by aconitine.

All the ether extracts contained an alkaloid (in addition to the morphia found in two). Neither the vomit nor the urine nor any of the viscera, &c., contained any quinine. Percy John could not, therefore, have been poisoned by taking either a quinine pill or powder containing aconitine of the nature of those found among his things after death.

This alkaloid gave no special characteristic colour reaction with the usual reagents.* This, although a negative test, is nevertheless of some value, and a number of other alkaloids, which might perhaps have accounted for the symptoms observed are thereby excluded.

The ether extracts produced characteristic and remarkable effects on the tongue, and these effects were proportional, as far as could be judged, to the proportion of alkaloid, other than morphia, contained in the ether extracts.

The ether extracts proved rapidly fatal to mice, after producing a series of symptoms undistinguishable from those produced by Morson's aconitine given in such doses as to prove fatal in, approximately, the same times.

The fatal effects were, as far as could be judged, proportional to the intensity of the effects produced on the tongue.

* So-called German aconitine yields a feeble colour reaction with sulphuric acid or when gently heated with phosphoric acid. This reaction is, however, no doubt due to the presence of impurities and is not yielded by the purer English preparations.

The quantities of this alkaloid extracted from the various liquids, organs, &c., were completely in accordance with the assumption that far more than a fatal dose (2 grains) of aconitine had been administered by the mouth four hours or so before death. They stood approximately in the following order, beginning with the greatest amount: vomit, by far the most; urine; kidney, spleen, and liver; contents of stomach; intestines; stomach.

Aconitine.—Aconitine is the principal alkaloid extracted from Aconitum napellus. According to Dr. Alder Wright it has the formula $C_{33}H_{43}NO_{12}$, and when heated with water, more particularly in presence of acids or alkalies, it absorbs a molecule of water and breaks up into benzoic acid and aconine.

$$\underset{\text{Aconitine.}}{C_{33}H_{43}NO_{12}} + \underset{\text{Water.}}{H_2O} = \underset{\text{Benzoic Acid.}}{C_7H_6O_2} + \underset{\text{Aconine.}}{C_{26}H_{39}NO_4}.$$

Commercial aconitine, however, is usually a mixture of several alkaloids or of products of decomposition formed during its preparation. The purest preparations are Morson's and other English preparations, and some kinds of French preparations, the least pure being what is known as German aconitine, which contains also a considerable proportion of pikraconitine. It usually constitutes a pale brownish or fawn-coloured amorphous, or very indistinctly crystalline powder, but may be obtained perfectly crystallized. It is but very slightly soluble in cold water, sufficiently so, however, to impart to it a distinctly alkaline reaction; in boiling water it first becomes softened and finally dissolves in the proportion of 1 part to about 50 parts of water. It is readily soluble in alcohol, ether, chloroform, benzol, amylic alcohol; insoluble, or nearly so, in petroleum ether. It yields crystallizable salts with nitric and hydrochloric acids. Pure (English) aconitine produces no colouration with concentrated sulphuric acid, or when evaporated with aqueous phosphoric acid, whereas the impure (German) aconitine yields a colour reaction with both these reagents. With both acids the colour passes from yellow or brown through reddish to violet. Of the general alkaloid reaction the most delicate are those produced by phosphomolybdic acid, iodide of potassium, potassic iodide of mercury, tannic acid, chloride of gold. One of its

most remarkable and striking characteristics is, however, the effect it produces on the tongue. The quantity to be tasted should, of course, be exceedingly small, $\frac{1}{500}$ grain or less, and at first no taste at all, or at most a very feeble bitter taste, is perceived; after the lapse of a few minutes, however, a peculiar sense of numbness begins to be felt in that part of the tongue to which the alkaloid has been applied; gradually this feeling becomes more intense and spreads over the tongue and even to the lips, and is accompanied by a peculiar feeling of dryness in the throat. In from three to five minutes the part touched becomes painful, the pain gradually increases in intensity, and in from ten to twenty minutes, unless the amount placed on the tongue was excessively minute, the pain becomes intense, as if the part had been touched with a red-hot iron, and this pain continues with slowly diminishing intensity for from four to six hours or more, and is unaffected by eating or drinking. No other substance, according to my experience, gives rise to similar symptoms, and when distinctly noted in the order described they may be taken as absolutely characteristic of aconitine. Aconitine is one of the most, if not the most, potent of all known poisons owing their poisonous character to a definite chemical compound, as distinguished from so-called septic poisons which, owing their poisonous character to living organisms may, under circumstances favorable to multiplication of these organisms, prove fatal in almost infinitesimal quantities; $\frac{1}{30}$ grain of pure aconitine would probably be a fatal dose for an adult.

Japaconitine, the alkaloid extracted from Japanese aconite, has, according to Wright, the formula $C_{66}H_{88}N_2O_{21}$. It is somewhat more stable that the preceding, but when heated with alcoholic potash it breaks up into benzoic acid and japaconine.

$$\underset{\text{Japaconitine.}}{C_{66}H_{88}N_2O_{21}} + \underset{\text{Water.}}{3H_2O} = \underset{\text{Benzoic Acid.}}{2C_6H_7O_2} + \underset{\text{Japaconine.}}{2C_{26}H_{41}NO_2}$$

Pseudaconitine.—This is the chief alkaloid extracted from Aconitum ferox, and has, according to Wright, the formula $C_{36}H_{49}NO_{12}$. When heated with alcoholic potash, &c., it breaks up into dimethylprotocatechuic acid and pseudaconine.

Pseud-aconitine.	Water.	Dimethylproto-catechuic acid.	Pseudaconine.

$$C_{36}H_{29}NO_{12} + H_2O = C_9H_{10}O_4 + C_{27}H_{41}NO_9$$

In general chemical character and physiological effects the two preceding alkaloids closely resemble aconitine. It is sometimes asserted that Morson's (English) aconitine is made from Aconitum ferox; and is therefore pseudaconitine, but according to Morson, this is not the case.

Ptomaines or cadaveric alkaloids.

As was to be expected, the question whether the various results and effects obtained or observed by Dr. Stevenson and myself, during our investigation into the nature of the poison, if any, which caused the death of Percy John, might not have been due to ptomaines was very properly raised for the defence, although, for obvious reasons, not pressed. It is one of the peculiarities of ptomaines to crop up on such occasions, and further that whatever may be the nature of the alkaloid alleged to have been employed, the existence of a ptomaine of similar properties is suggested or asserted. Some of these ptomaines are liquid, others are solid, amorphous, or crystalline; some are said to be powerful reducing agents, others have no such effect. Some are stated to be intensely poisonous, some are perfectly innocuous. The subject is apparently a very complicated one and very much remains to be done before it can be considered as satisfactorily worked out. The question is, however, even now of considerable interest to the toxicologist. The presence of an alkaloid or alkaloid-like substance in all the fluids, tissues, and organs of the human and animal body was first demonstrated in the year 1866 by the late Dr. Bence Jones and myself. This alkaloid we called animal quinoidine, on account of its remarkable blue fluorescence ('Proc. Roy. Soc.,' vol. xv, p. 73). The physiological action of the alkaloid was not then investigated. Several years later the subject was worked at by Schwanert, Gunning, Gautier, Boutmy, and others, but more particularly by Selmi, and a very considerable amount of literature on the subject has

accumulated. Nevertheless the subject is still in its infancy, and for our present purpose it must suffice to record that, according to various observers, alkaloid-like substances, in some cases closely resembling certain vegetable alkaloids, have been extracted from animal fluids and tissues, more particularly, though not necessarily, after they had undergone putrefaction. Alkaloids somewhat resembling coniine, nicotine, morphine, delphinine, and even strychnine have, among others, been reported as thus extracted. None of these so-called alkaloids, however, show all the characteristic reactions, chemical or physiological, of the vegetable alkaloid with which they have been compared, and it seems to have been in each case comparatively speaking easy to demonstrate the difference. The suspicion strongly obtrudes itself that in most, if not all, of these cases, very impure materials have been worked with, and the possibility that the action of a septic poison has been mistaken for the action of the supposed alkaloid extracted seems by no means excluded. This suspicion is greatly strengthened by observations recorded by several investigators, that the more care is observed in purifying these cadaveric alkaloids the less of them is found. Bearing in mind, however, the possibility of meeting with a ptomaine when searching for a poisonous alkaloid, more particularly when dealing with putrid materials, the toxicologist should, in the first place, carefully purify the alkaloid he has extracted, during which process ptomaines generally seem to disappear, and in the second place, he should investigate, as far as possible, *all* chemical and physiological characters of the alkaloid he has isolated and compare them directly with those of the alkaloid which he believes to have found. Whenever possible, vomited matters, urine, contents of stomach, liver, &c., should be separately treated, and the quantity and quality of the alkaloid extracted from each should be compared. If all these yield an alkaloid of the same character, corresponding in all respects to a known vegetable alkaloid, and in relative quantities such as can be accounted for on known principles of the distribution of substances introduced into the living body, he need not fear being misled by a ptomaine. In concluding this very short and imperfect sketch of the subject

of ptomaines, I would, however, repeat emphatically that, whenever the work of extraction is carefully performed, a small amount of alkaloid extract is always obtained, even if not more than an ounce or so of material has been extracted; if such is not the case, some mistake has been made. It is only by practice that the difficulty thereby occasioned can be overcome.

There is one other question which has arisen out of the Lamson case which has been but little, if at all, discussed and which yet is of considerable interest as regards the probable progress of toxicology in England. I approach this subject with some hesitation, as I feel strongly that the motive of bringing it forward is liable to be misunderstood, but after mature consideration I have come to the conclusion that the possibility of being misunderstood ought not to prevent my speaking out on behalf of what I consider to be of vital interest to the progress of toxicology in England.

In consequence of some agitation during the progress of the Lamson case the Home Secretary thought it his duty to delegate his power of appointing the person or persons to conduct the analysis, in cases of suspected poison taken up by the Home Office, to the Presidents of the Royal College of Physicians and the Royal College of Surgeons. This seems to have been done under the belief entertained, apparently, by many lawyers and shared by members of the general public and even of the medical profession, that the separation and identification of a poison is a problem for a medical man to solve. Now, I have no hesitation in affirming, and there can indeed be no doubt about it, that the extraction of a poison from the fluids, organs, or tissues of a body is *in every case a purely chemical process,* and has absolutely nothing to do with medicine, while the identification of a poison is also in by far the majority of cases a purely chemical question, and the amount of strictly medical knowledge required in the remaining cases is, to say the least, exceedingly slight. It follows that the proper person to apply to to detect a poison is a chemist, not a medical man, at any rate, not on account of his medical knowledge. Hitherto toxicology has been advanced mainly by the work of chemists, and if it should be found, as will be the case if the present

arrangement be persisted in, that chemists will gradually be excluded as experts in cases of poisoning, they will cease to take interest in the subject, and thus the science of toxicology in England is sure to suffer. I trust, therefore, that it may not yet be too late slightly to alter the arrangement at present existing, and to render the President of the Institute of Chemistry jointly responsible with the Presidents of the Royal College of Physicians and the Royal College of Surgeons for the nomination of the person or persons to whom the investigation in cases of suspected poisoning should be entrusted.

We add a short abstract of the case and post-mortem of Percy John.

The evidence given in the case of Regina *v.* Lamson on March 10th, 1882, and following days was briefly as below:

Dr. Lamson, the brother-in-law of a young schoolboy, Percy John, poisoned him by an alkaloid administered in a capsule. It appears that Lamson had made two previous attempts to kill the boy; the first time was in the early part of 1881, when he sent him some quinine powders from America. Mr. John took one of these powders, but was "so unwell" that he refused to take another. The second time was in August, 1881, after Lamson's return from America, when he gave John a quinine powder or pill. This time he complained of "feeling paralysed all over," and very unwell. His bowels were greatly relaxed. He recovered, however, in about twelve hours.

Percy John was described as of a muscular frame in the upper half of his body, but his lower extremities were shrivelled, all the joints being rigidly contracted and flexed. He also suffered from a spinal curvature. His health was generally good, and he had been seldom attended by doctors.

On December 3rd Lamson visited Percy John at the school and during the interview induced him to swallow a capsule presumably filled with sugar; this was at 7.20 p.m. About half an hour after this John complained of heartburn, and a few minutes after said he felt as he had done at Shanklin

after he took the quinine powder given him by Lamson. He was taken upstairs, and at 8 p.m. began to vomit; he said his skin felt "all drawn up," and that his mouth was painful. At 8.30 he was in great pain, and violently sick; at 8.55 he was seen by Dr. Berry, who said in evidence that he had seen Percy John on the night of December 3rd. He was in bed suffering great pain in the abdomen and vomiting; he complained of inability to swallow, with constriction of the throat and drawing of the skin of his face. The vomit was dark-coloured fluid. He became very restless, the sickness continuing and the pain becoming worse. Poultices were applied to the belly, and at 10 p.m. ¼ gr. of morphia injected. This gave temporary relief. An hour afterwards the pain returned more severely than before, and morphia was again injected, but without effect. At 11.10 p.m. he began to wander and became unconscious, his breathing slow and sighing, and the heart's action weaker and weaker. He died at 11.40 p.m., four hours and five minutes after the poison was administered.*

The post-mortem was made by Mr. Bond and Drs. Berry and Little on December 6th.

Rigor mortis had passed off; putrefaction had not commenced; there were no marks of injury. The surface of the body was pale; the pupils were widely dilated; the mucous membrane of the mouth was blanched; and the tongue white and furred. On removing the skull-cap the membranes of the brain appeared healthy, but the vessels were full of black fluid blood. The substance of the brain was healthy, though the puncta cruenta were more marked than usual; there was no fluid in the ventricles. The spinal cord was removed and examined. The vessels of the membranes were also full of dark fluid blood; the substance of the spinal cord was of a brickdust colour, and it was difficult to distinguish the grey from the white matter. The pericardium contained about two drachms of blood-stained fluid; the heart was flaccid, the cavities quite empty; the valves were healthy. There was a little blood-stained fluid in the

* In Dr. Stevenson's paper on "Poisoning by Aconitine," vol. xli 'Guy's Hospital Reports,' a case is recorded of a chemist poisoned by aconitine who complained of peculiar sensations in the skin.

pleural cavities, and some few adhesions over the apex of the right lung; the lungs were healthy but much congested at the bases. The stomach contained four or five ounces of dark fluid; the mucous membrane was congested throughout, and towards the cardiac end were several small yellowish-grey patches, raised above the surface, each about the size of a small bean. There were two or three similar patches near the pyloric orifice. The mucous membrane of the duodenum was also thickened and red, and throughout the small intestine were scattered patches of congestion; the large intestine was healthy. The liver, spleen, and kidneys were of a dark purplish colour but healthy substance. The bladder contained three or four ounces of urine.

The following parts were taken for analysis: 1. The stomach and contents. 2. The duodenum and part of the ileum with the cæcum. 3. The lower part of the rectum. 4. Portions of the liver, spleen, and kidneys. 5. The urine.—[Ed.]

CASE

OF

INDEFINITE RETENTION OF A BLIGHTED OVUM.

By Dr. POTTER.

Cases of incomplete abortion are sufficiently common where portions of the ovum are retained for a length of time, giving rise to various serious symptoms. Some few cases also have been recorded where symptoms of uterine action, indicating the attempt to expel a blighted ovum, have occurred, yet the ovum has been retained in its entirety for a varying length of time. These are some of the most troublesome and dangerous cases that we have to deal with in practice. The case that I am about to relate differs from these in that no attempt is made on the part of the uterus to expel its contents. I am therefore justified in my title of "Indefinite Retention of a Blighted Ovum."

E. S—, æt. 31, married, was admitted into the Arden Ward on March 18th, 1884. She had had seven children, all at the full time, the last born two years and a half ago. Had never miscarried. Patient was perfectly regular until July 27th, 1883, when she ceased menstruating and has seen nothing since.

She believed that she then became pregnant, for early

in August she had morning sickness, as in her other pregnancies, and this continued on and off until December. The breasts also got larger, and the areolæ became dark as she had observed in her previous pregnancies. The abdomen also gradually increased in size, and she felt fœtal movement from October to Christmas. For one week in October there was a white discharge from the vagina. In November the patient noticed a sound as of wind passing from the vagina; this continued occasionally until the latter part of January. Nothing unusual occurred until the end of January, when the abdomen got rapidly swollen, and the patient lost flesh and appetite, complaining of aching in the limbs, headache and general malaise, with an aching pain in the right side of the abdomen. In February she noticed for the first time an offensive odour, "as if after confinement," coming from the vagina. This continued up to the time of admission into the hospital and was afterwards noticed more after a vaginal examination. On March 4th the patient consulted her own medical man, who told her that he thought that she had been pregnant, but that it was probably extra-uterine. There has been no discharge or hæmorrhage of any kind.

On admission it was noted that the patient had a sallow complexion; the mammæ, especially the left, were rather shrunken. The abdomen was flat, its surface fairly resonant; in the hypogastric region, and to the right of the middle line, there was a softish tumour about the size of a large orange. Per vaginam the cervix uteri was found in its normal position, the os rather patulous, lips thick. In the anterior *cul-de-sac* was to be felt a swelling seemingly continuous with the uterus. Bimanually the uterus was easily felt and appeared enlarged; impulse was communicated from the swelling felt in the right hypogastrium. There was an indistinct feeling of *ballottement*. Sound not used.

March 25th.—Sound passed to-day, with ordinary curve, two and a half inches in a forward direction, but withdrawn and the curve much increased, it passed four inches in a forward direction and slightly to the right. A distinct impulse was conveyed on pressing on the swelling in the hypogastric region. A sponge tent was then inserted.

26th.—Tent withdrawn, the internal os is still undilated.

An ounce of fresh infusion of ergot was ordered to be taken three times a day.

27th.—The ergot has set up no uterine action, and a laminaria tent was introduced this evening.

28th.—About 5 a.m. patient complained of severe pain in hypogastrium, accompanied by a slight show of blood. At 10.30 a.m. the laminaria tent was withdrawn; os is now the size of a shilling and a distinct bag of membranes can be felt. Abdominal examination shows that the swelling in right hypogastrium is now much harder and more clearly defined. At noon the os was the size of a shilling-piece and the membranes protruding half way down the vagina. At 2.20, a slight watery discharge, immediately followed by the expulsion of the contents of the uterus. These consisted of a placenta alba three and a half by three inches, with a bag of unbroken membranes on the side of it which was opposite to the uterine surface. Apparently surrounding the last was another bag of membranes which had ruptured. On opening the "inner membranes" a dark-brown fluid escaped, and in this was a small fœtus about one and a quarter inches in length, with rudimentary limbs, &c., and attached to the placenta by its umbilical cord. This aspect of the placenta appeared very irregular, being raised into nodular masses.

Further progress of the case.

30th.—Slight rigor at 9.43 a.m., but no elevation of temperature. Very little hæmorrhage; no clots.

April 2nd.—Patient complains of some pain in right thigh and lumbar region. No discharge of any kind. Injections of carbolic acid 1—80 were used three times in the day.

Patient continued to make uninterrupted progress and was discharged quite well on April 16th.

The principal point of interest in this case is the prolonged retention of the products of conception without any attempt on the part of the uterus to cast them off. There is very little doubt, from the extreme regularity of the patient, that the pregnancy dated from the end of July or early in August, and that the ovum became blighted at about the sixth or eighth week, the placenta continuing to develop for some time after. At the same time we have symptoms of spurious pregnancy, abdominal enlargement and feeling of movement

until the end of January, when the patient, becoming suddenly smaller, began to suspect something unusual. Her own medical man who saw her at the beginning of March correctly diagnosed the existence of pregnancy, although, from examination, not at all corresponding with the time, eight months, at which it might be supposed to have arrived. From his examination he not unnaturally suspected it might be a case of extra-uterine pregnancy, and it was only by examination with the sound that this point could be cleared up. With regard to the managment of the case it was considered advisable after the passage of the sound that the os should be dilated and the uterus emptied as rapidly as possible to avoid any risk of septic infection. In other respects it was treated as an ordinary case of abortion. The case probably comes under the category of "missed abortion," but as this term has been much and very properly objected to, I have preferred the term "indefinite retention of a blighted ovum" or "retained abortion." It would be of great interest in a case of this kind, if the health of the patient admitted of it, to watch the case and see how long the uterus would remain in its inactive condition and retain the product of conception.

NOTES FROM THE THROAT DEPARTMENT.

By Dr. DE HAVILLAND HALL.

In drawing up a report on the Throat Department I thought that it would be of more general interest if, instead of presenting a series of statistical tables, I took some of the more important affections and drew attention to a few of the salient points, illustrating these by cases. Moreover, as the department is open only one day in the week (Wednesday), and that at the somewhat inconvenient hour of 9 a.m., the number of patients attending is too small to render the figures of one year of much value from a statistical point of view.

Laryngeal Catarrh.

Of the twenty-three cases of uncomplicated laryngeal catarrh (*i.e.* laryngeal catarrh not depending on tuberculosis, syphilis, or one of the zymotic diseases), six were either so slight or unimportant that the patients attended the department only once. The remaining cases were under treatment for a period varying from two to three weeks up to several months. In addition to these there were six instances of combined laryngeal and pharyngeal catarrh in which it was difficult to assign the chief importance to the larynx or the pharynx, and in most of the cases of granular pharyngitis a varying amount of laryngeal catarrh was present. The cases are too few to admit of much generali-

sation, but one or two points seem to me to be worthy of notice. The first is the importance of carefully examining the nostrils and naso-pharyngeal cavity in all cases of laryngeal catarrh; in many instances a congested state of the vocal cords is kept up by the patient breathing through the mouth instead of by the nostrils, and till nasal respiration is attained it is hopeless to attempt to cure a laryngeal catarrh. Another point is the efficacy of chloride of ammonium in five- to ten-grain doses, either given alone or in combination with iodide of potassium, in cases of chronic laryngeal catarrh where the mucous membrane is dry and the expectoration is viscid and scanty; the third point is the importance of improving the tone of the muscles by electricity in cases where loss of voice persists in spite of the subsidence of the congestion. In acute and subacute cases of laryngeal catarrh, I have found most benefit from sedative inhalations of the vapor benzoini.

In chronic laryngeal catarrh the direct application of astringent remedies to the larynx is almost invariably indicated, and this is best effected by using the laryngeal brush and solutions of chloride of zinc, nitrate of silver, &c.; but this subject has been so ably handled by Dr. Semon in a paper read before the East Surrey District of the South Eastern Branch of the British Medical Association,* that I do not think it necessary to do more than refer those who require more information to Dr. Semon's paper. And, in passing, I would state that owing to the difficulty of getting applications made regularly in hospital patients, the prognosis of chronic laryngeal catarrh as regards complete recovery of voice in these cases is not good.

Neuromimesis.

The next in order of frequency are cases of what, following in the steps of Sir James Paget, I shall call neuromimesis, *i.e.* a nervous disorder producing "an irritation or mimicry of organic local disease." As he has pointed out, this term is preferable to that commonly employed—hysteria—but I

* See 'British Medical Journal,' Jan. 24th, 1880.

would extend the use of the term so as to include under it cases of patients suffering from sense of suffocation, aphonia, &c.

In all my eighteen cases the patients were females, but it would not be correct to infer from this that the malady in question does not occur among males. It must always be borne in mind in considering statistics taken from the out-patient room that, as a rule, men do not apply for relief as long as they are able to work, but that women can arrange their domestic duties so as to allow them to seek hospital relief for comparatively slight ailments. Still, from my experience in private practice, I am certain an overwhelming majority of these cases occur amongst females. The more emotional character of their temperament and the influence of menstruation, pregnancy, parturition, and lactation, to say nothing of diseases of the generative system, will fully account for this fact. In eight of the cases there is a note of some kind or another pointing to ovarian or uterine disturbance, and had inquiry been made in other cases, doubtless analogous evidence would have been obtained. In the married this affection is most frequently found associated with sterility, and in the single with dysmenorrhœa, but hyperlactation, menorrhagia, and the menopause are also causal conditions. On looking over my notes I find that there are six cases of functional aphonia, *i.e.* loss of voice from paralysis of the adductor muscles of the larynx. As has been frequently pointed out, loss of power in the adductor muscles points to functional disorder, whereas loss of power in the abductor muscles is almost invariably due to some organic disease. Of three cases, aged respectively twenty, twenty, and twenty-three, the first two were single, one suffering from scanty, painful menstruation, and in the other, a very anæmic patient, the menses appearing every fortnight. All three were faradised with immediate restitution of voice. Of the remaining three, in one aged thirty-seven, the functional element was complicated with a certain amount of catarrh, but there were other evidences of neuromimesis, as, for instance, the globus hystericus, and difficulty in swallowing liquids. The other two cases were aged twenty-eight and thirty-seven respectively, improved under tonic treatment, and did not require the use of the battery.

The more I see of functional aphonia the more I am convinced of the necessity of looking to the cause and treating that before attention is directed to the larynx. I make it a rule never to faradise a patient on her first visit. In the majority of cases of functional aphonia the patient will be found to be suffering from anæmia or debility, and I have learned from experience that even if the voice is restored by the use of the battery, relapse is very likely to occur. Again, if success does not attend the first sitting it will be difficult to get the patient to undergo the repetition of the process which is necessarily very disagreeable. I therefore order the patient on the first interview some tonic, generally liquor strychniæ in combination with sulphate of iron and sulphate of magnesia in chloroform water, and the aloes and assafœtida pill of the Pharmacopœia, or valerianate of zinc, at night. After a week or a fortnight of this treatment, according to circumstances, faradisation may be undertaken with the certainty of its effecting a cure. There can be no doubt, I think, that the intra-laryngeal electrode invented by Dr. Morell Mackenzie is the best mode of applying the current. The mental effect of introducing the electrode into the larynx is good, and it seems reasonable to believe that the current will have a more stimulating effect if applied directly to the muscles at fault. If there is any congestion of the cords this is to be treated before faradisation is employed. It must be borne in mind that in many cases which are of catarrhal origin loss of voice persists for a considerable time after the congestion which first caused the aphonia has passed away, the continuance of the affection being due to the loss of tone in the muscles of the larynx. The best treatment for this is electricity in the form of the faradic or galvanic current.

The remaining cases which I would include under the term neuromimesis afford examples of the kinds of complaints made by patients of this sort. The symptoms may be grouped according as they give rise to sensory or motor trouble—among the former, complaints of tickling in the throat, burning pain, sense of constriction about the larynx, lump in the throat, and choking sensations may be enumerated, and among the latter difficulty in swallowing and in speak-

ing, and hard, barking cough. In the majority of the cases there are no objective appearances, but in a certain number enlargement of the tonsils, a granular condition of the pharynx or a dilated state of the vessels of the pharynx appears to be the starting-point of the irritation.

If there be any local trouble the treatment of this must be carried on contemporaneously with constitutional treatment. The local treatment adopted in these cases will be described under the head of granular pharyngitis. Constitutionally, the cure of the disease may be attempted in one of two directions, either to improve the nervous tone of the individual by such remedies as arsenic, zinc, iron, the compounds of valerian, cod-liver oil, or by the use of sedative remedies, especially the bromides. In some few cases I have tried counter-irritation over the third and fourth dorsal vertebræ; my experience of this form of treatment is, however, at present too limited for me to speak with any confidence.

Under this division I may make mention of a case of laryngismus stridulus occurring in a woman of thirty. She stated that three weeks before her attendance at the hospital she had suffered from sorethroat. Her tonsils were found to be enlarged. An astringent application was ordered to the tonsils, and ten grains of bromide of potassium given in combination with a similar quantity of the ammonio-citrate of iron three times a day; after the commencement of this treatment there was only one slight recurrence of the complaint and she was discharged on the 28th of May quite well.

Another case of irregular muscular action is that of a woman of twenty-three, a domestic servant, who came on account of inability to open the mouth—the so-called hysterical trismus. This came on quite suddenly and had lasted five days when she applied at the hospital. As the patient was in a debilitated condition she was ordered a tonic containing the ammonio-citrate of iron, and had some soap liniment with which to rub the muscles of the jaw. She soon regained the power of opening the mouth.

Secondary Syphilis.

In the eighteen cases of secondary syphilis affecting the throat, there were no lesions to be found in the larynx characteristic of the disease, and in only five were there any laryngeal changes at all. The conditions present were those of laryngeal catarrh; in one case the epiglottis is noted as being swollen, but nothing resembling a condyloma was seen. In doubtful cases the enlargement of the occipital glands has been found to be of great assistance in arriving at a correct diagnosis, and I have been much struck with the very early complaint of pain in the head made by some of the patients, even as soon as six weeks after infection. With the exception of two doubtful cases, all the cases were treated with mercury in some form or another, usually Hyd. cum Cretâ gr. ijss, ter die.

Locally the tannic acid or chlorate of potash gargle of the hospital pharmacopœia was employed. Mucous patches on the tongue, cheeks, and tonsils were speedily cured by painting them twice a day with a solution of chromic acid (ten grains to the ounce) as suggested by Mr. Butlin, but I quite agree with him that the very success of this plan of treatment has a disadvantage in that the cure of the local lesion leads the patient to imagine that he may cease to attend and hence, unless the medical adviser has his patients well in hand, they do not get a sufficiently long mercurial course, and relapses are consequently apt to occur.

Tertiary Syphilis.

In the cases of tertiary syphilis which have come under my notice in the Throat Department two peculiarities deserve attention; one is the great tendency to the formation of excavated circular ulcers in the posterior wall of the pharynx due to the formation of a gumma and subsequent sloughing of the same, and the other is an affection of the crico-arytænoid joint. As an instance of the former I may quote the case of C. F—, a woman æt. 40, who came under

treatment on September 19th, 1883, suffering from a gumma on the palate, which was breaking down. She was ordered ten grains of iodide of potassium three times a day. On October 3rd it was noted that there was a discharge from the left nostril of a fœtid nature, and that the gumma was clearing out. The dose of iodide was increased to fifteen grains, and a mixture of starch and iodoform was directed to be insufflated up the nostril. On the 10th the gumma had cleared out, and on the 24th the ulcerated surface was healing. The healing process was accelerated by the use of sulphate of copper locally, and of the galvano-cautery to promote the closure of the hole left in the palate by the sloughing out of the gumma. The patient discontinued treatment for some months, and on April 2nd the ulceration of the posterior wall of the pharynx to which I have already drawn attention made its appearance. The fifteen-grain doses of iodide were resumed, the ulceration rapidly healed, and by April 30th the surface was scarred over. Again the patient discontinued treatment, and this time a gumma formed in the hard palate. Twenty-grain doses of iodide were ordered, together with cod-liver oil, but the disease was more obstinate on this occasion as some months elapsed before the ulceration caused by the separation of the gumma healed, and even while the iodide was being taken a circular excavated ulcer formed in the posterior wall of the pharynx. In a case in private, the patient being a medical man of the age of fifty-five, the symptoms suggested to my mind the idea of cancer, and, as I afterwards discovered, that was what the patient himself feared. The brief notes in my case-book are as follows: "Has had ear-ache almost daily for six months—right ear—with neuralgic pain shooting down neck, relieved by warmth. About a month ago began to feel a little pain in swallowing. Feels a little below par. Behind right sterno-mastoid one and a half inches below ear, tenderness on deep pressure." On examining the pharynx I found an oval, somewhat irregular, excavated ulcer, covered with a kind of slough. On questioning the patient I found that he had had syphilis at the age of fifteen, but that he had had no secondary or tertiary manifestations, his health having been excellent till the commencement of

his present illness. There was no loss of flesh. Had I not had the opportunity of seeing similar cases previously I own that I should have been in some doubt as to the diagnosis; as it was I ordered the patient ten grains of iodide of potassium in a wineglass of claret three times a day, and when the patient came eight days later the slough had disappeared, and the patient made a speedy and complete recovery.

Quite recently I have seen another case in which there was such marked cachexia that the surgeon in attendance was inclined to regard the case as malignant. The great loss of tissue, with but little thickening of the edges of the ulceration, seemed to me to point to tertiary syphilis, and the administration of doses of ten grains of iodide of potassium with two of sulphate of quinine soon dispelled any doubt by the rapid healing which occurred.

As regards the affection of the crico-arytænoid joint I have seen several cases in which there has been enormous swelling of the ary-epiglottic fold and corresponding arytænoid cartilage with consequent dyspnœa. These cases have recovered under the use of iodide of potassium, but the joint has suffered, as shown by more or less immobility of the vocal cord evidently due to partial or complete ankylosis of the crico-arytænoid joint. This condition of joint seems to me precisely similar to what happened to a man whose case I have described in the 'Clinical Society's Transactions' for 1884. Here the mischief occurred in the knees, ankles, and joints of the fingers. There was rapid enlargement of the joints, which became very swollen and exceedingly tender and painful. Under the influence of iodide of potassium and the inunction of blue ointment the effusion cleared up, and the joints were left only somewhat stiff. I have recently had a case under treatment in which the swelling of the arytænoid cartilage was so great that I feared the woman would die in the out-patient room, so urgent was the dyspnœa.

Laryngeal Phthisis.

In eleven out of the eighteen cases of pulmonary phthisis coming under treatment for hoarseness there were found distinct evidences of laryngeal phthisis; in the remaining cases the appearances were those of a chronic catarrh. Among the cases of laryngeal phthisis in one the hyperplasia of the inter-arytænoid fold of mucous membrane was so great as to resemble a sessile papilloma. The milky exudation which bathes the mucous membrane in cases of laryngeal phthisis is eminently characteristic of this affection.

Of the cases of laryngeal trouble (not phthisical) complicating pulmonary consumption one had a syphilitic history, and it is possible that the condition of the larynx may have been of specific origin. The patient, however, was not sufficiently long under treatment to settle this question. In a man, aged fifty-one, a swollen and congested state of the right vocal cord preceded by some months any lung mischief, and at one time I was disposed to look upon the throat trouble as of a malignant nature, especially as the glands on the right side of the neck were somewhat enlarged. After a time, however, marked signs of pulmonary phthisis developed, and the laryngeal affection became more general so that the difficulty in the diagnosis was cleared up.

Intrathoracic Aneurysm.

Two cases of intra-thoracic aneurysm applied at the Throat Department suffering from hoarseness. In one case the vocal cords were thickened, irregular, and congested, and they did not completely approximate on phonation. In this case the laryngoscope did not assist in the diagnosis, but in the other case it was a laryngoscopic examination which first directed attention to the possibility of the existence of an aneurysm. On the patient's first visit on January 4th he applied to the general out-patient department, and stated that he had suffered from pains in the chest for the past month, night sweats, loss of flesh, slight cough, and digestive

disturbance. There had not been hæmoptysis. He gave a history of winter cough extending over five years, and stated that his mother died of phthisis. The physical signs were those of slight emphysema with a suspicion of phthisis in the left supraspinous fossa. Unfortunately no laryngoscopic examination was made at this time. He continued to attend till February 4th.

On March 3rd he again applied, suffering from hoarseness which had existed a fortnight. He was referred to the Throat Department, and on the 5th the left vocal cord was found in the cadaveric position. This led to a careful examination of the chest. Pulsation was felt over the upper part of the sternum most to the left. The heart-sounds were clear and free from murmur, but there was accentuation of the aortic second sound. On percussion the note was dull over the pulsating region. The pupils were equal, as was also the pulse in the radials. The diagnosis of aneurysm of the arch of the aorta was made. By April 2nd there was an increased amount of dulness in the second interspace on the left side, and a distinct systolic murmur was audible over the dull area. The pulse in the left radial was smaller and feebler than that in the right. In this case the discovery of the condition of the left vocal cord at once put us on the right track, and there is no doubt but that if the systematic examination of the larynx was included in the general routine, much valuable information would not unfrequently be gained not only in thoracic cases, but also, as Dr. Semon has pointed out, in diseases of the central nervous system.

Besides the two undoubted cases of aneurysm two other patients came under treatment with the left vocal cord in the cadaveric position, but in neither case were there any definite signs of an intra-thoracic aneurysm.

One of these patients was a man, æt. 42, who applied on April 2nd, stating that he had lost his voice on March 14th, and on the 31st had coughed up half a pint of dark blood. Examination of the chest revealed nothing abnormal. The pupils were equal, and no difference could be detected in the pulse in the radials. The left arm, however, was distinctly colder than the right. The patient unfortunately only attended once.

The other case was a man of thirty-three, who came complaining of hoarseness which had existed six or seven weeks. The left vocal cord was found in the cadaveric position and somewhat congested; there was compensatory action of the right cord. There was deficient entrance of air on the left side of the chest, the breathing was of a bronchial character, there were occasional râles, especially at the apex, and the percussion-note was somewhat impaired. The left pupil was rather more contracted than the right; at first there was no inequality in the pulse, but on his third attendance it was noted that the left pulse was somewhat fuller than the right. The impulse of the heart was felt in the epigastrium, and the sounds were quite clear.

Though in both of these cases physical examination of the heart and great vessels revealed no indication of disease, I think it will be agreed that the most probable cause of the immobility of the left vocal cord was pressure on the left recurrent nerve (mechanical fixation of the cord due to ankylosis of the crico-arytænoid joint having been excluded by the absence of all local signs of disease); if an affection of the recurrent laryngeal nerve be admitted, then the idea of an aneurysm should at once be entertained. From my experience I would state most unreservedly that in the vast majority of cases fixation of the left vocal cord in the cadaveric position, independent of disease of the crico-arytænoid joint, points to an intra-thoracic aneurysm; and this position of the cord can often be recognised before there are any other physical signs of the disease.

Granular Pharyngitis.

Granular pharyngitis, a condition which so frequently requires treatment in private practice, does not, at least in my experience, so often come under notice in the out-patient department. This difference may partly be explained by the busy lives led by the majority of out-patients preventing them giving the attention to subjective sensations which those in a higher social position can, and by the fact that the greater luxury and easier lives of the upper classes render

them more subject to reflex symptoms starting from slight local irritation. At all events I have notes of only twelve cases of granular pharyngitis during the past year at Westminster, and in five of these the symptoms were so slight as not to require local treatment, but recovered under the use of sedatives, such as bromide of potassium or morphia, tonics, and attention to the digestion; in the remaining seven the galvano-cautery was employed with a good result. By granular pharyngitis is meant that condition of the pharynx in which the mucous membrane is studded with roundish or oval elevations of a redder colour than the mucous membrane generally; the vessels of the pharynx are at the same time usually considerably dilated. The discomfort caused by these granules is out of all proportion to their size, and they serve as the starting-point for the various reflex disturbances described under the head of neuromimesis.

As a rule, four or five sittings will suffice to effect a cure, and at each sitting four or five of the granules are destroyed and the dilated vessels cut across. For this purpose I use the galvano-caustic instruments invented by Schech, of Munich, which answer admirably. The pain produced by the application of the cautery is quite of a trivial nature and is generally described by patients as being rather of the nature of discomfort than actual pain. At the first sitting I am somewhat chary as to the amount of cauterisation I do, as patients differ so widely in their capacity for resisting pain and in their susceptibility to inflammation. Should much pain and inflammatory disturbance be set up, the patient may be directed to suck small pieces of ice, but I can hardly remember a case in which this has been necessary. The galvano-cautery is much to be preferred to the use of London paste as advised by Dr. Morell Mackenzie.* I have tried both plans and I have not the slightest hesitation in giving the preference to the galvano-cautery. One great advantage of it is that the destructive action can be exactly limited to the part touched, whereas when using the paste there is always some danger that particles of the caustic may get detached. As regards the galvano-cautery being an "alarming method" I have never had the slightest difficulty in

* 'Diseases of the Throat and Nose,' vol. i, p. 37.

getting the most nervous patient to consent to allow me to make an application. It is advisable while the local treatment is in progress to pay attention to any defects in the general constitution which may be present. Tonics, especially iron and arsenic, are generally of use, and if derangements of the digestive system are present, as is very frequently the case, they should receive due attention. As regards the moot question of smoking, there can be no doubt that excessive cigarette smoking does keep up pharyngeal irritation.

Diseases of the Nose.

Of the cases of nasal polypi three are of interest. In one the patient was a girl of fifteen, which is a year younger than the youngest of the cases recorded by Dr. Morell Mackenzie. The second was that of a woman, æt. 62, who had been unable to breathe through the nose for upwards of forty years; she had been operated on at least twelve times with the forceps, but never very effectually. At the first sitting six or seven large polypi were removed from the right nostril and the patient was able to breathe freely through it. The galvano-caustic loop was used in every case and gave very good results. Patients who had previously been operated on by forceps or the snare expressed their decided preference for the galvano-caustic plan. The introduction of cocaine into the domain of therapy has still further facilitated this plan of treatment. If the lining membrane of the nasal passages be swabbed out with a 10 per cent. solution of cocaine, or, still better, sprayed with the ingenious apparatus designed by Mr. Percy Dunn and described in the 'British Medical Journal' for June 13th, 1885, the pain consequent on the introduction of the steel loop is practically abolished, and the base of the polyp can be thoroughly cauterized, after the removal of the polyp, without causing any pain.

The remaining case concerned a man who applied at the Throat Department and stated he had been under treatment at another hospital for asthma. On examining the nostrils they were found to be occluded by polypi, on the removal of which the asthmatic paroxysms greatly abated. The con-

nection between nasal irritation and asthma has been so frequently insisted on that one is astonished to find how generally a systematic examination of the nostrils is omitted in cases of asthma.

Hay fever has attracted so much attention lately, especially since it has been pointed out that some cases may be cured by energetic local treatment of the nasal mucous membrane, that I am induced to give the notes of a case of excessive sneezing similar to an attack of hay fever.

R. H—, æt. 60, a hawker, applied at the hospital on June 18th stating that he had been suffering from excessive sneezing lasting nearly all day since the previous July. The attack came on after buying some sacks of waste paper at a chemist's. He also stated that a cat which had scratched about in the paper had running at the nose and died. On examination the mucous membrane of the nose was found to be thickened. Almost as a placebo, and certainly with but little hope of doing much good, I ordered a lotion containing the glycerine of carbolic acid, bicarbonate of soda and borax, to be used lukewarm by means of a syringe. On the 25th the sneezing was considerably less. The patient reported that he had only sneezed once yesterday and not at all to-day. He was then lost sight of till April, 1885, when he again applied at the hospital, and stated that since his last visit he had been quite free from sneezing, *i.e.* he did not sneeze more often than the generality of people till about a fortnight ago. He attributes the return of his troublesome complaint to the circumstance that he has been much exposed to dust lately, moving carpets, &c., at quarter day. He had seven or eight attacks yesterday, the attacks lasting from seven to ten minutes and being attended with an inflamed state of the eyes. He was ordered the same lotion as before, and I have not seen him since. The whole description of the case is so like what one hears in hay fever that I have no hesitation in classing it with that disorder. The complete cure of so troublesome an affection which had lasted eleven months by so simple a measure as the syringing out of the nostrils would encourage one to persevere in the local treatment of hay fever and allied conditions.

One case of loss of smell is worthy of special mention, as there appears to be good evidence as to the cause of the affection:

A. P—, æt. 28, a single woman, applied on January 10th complaining of loss of taste since December 28th. She stated that her brother died of enteric fever on December 15th, and that on the 19th the house was most thoroughly disinfected, the smell of the disinfectant used being very strong. The next day she could neither smell nor taste, and she was slightly deaf. The last two days before she attended at the hospital she had suffered from flatulence and vomiting after meals. On making inquiry the Inspector of Nuisances informed me that the disinfectants were carbolic powder and phenyle.

The patient was tested with tr. nucis vomicæ, but could not taste it; tr. zingiberis she said was hot; nitrate of potash she could not taste; sugar she said was sweet. She stated that she was unable to recognise flavours from food. She smelt liquor epispasticus, acetic acid, and linimentum iodi.

On January 23rd she was much better in all respects; was able to taste food better and her hearing was improved.

30th.—Taste completely restored. She continued under treatment a few weeks longer, and on April 30th she came and reported that she was quite well.

Bronchocele.

Of the cases of enlargement of the thyroid gland only two are worthy of special notice.

The first was a girl of fifteen, employed as a machinist. She applied on June 5th, complaining of weakness and loss of appetite, and stated that the neck had suddenly become enlarged the day before. The catamenia had commenced three months previous to her attendance, the last period having been over fourteen days. On examination a soft uniform enlargement of the thyroid was found; there was no exophthalmos, the pulse was 128, and there was a soft mitral systolic murmur. She was ordered ten grains of the

ammonio-citrate of iron, and five minims of the tincture of digitalis. On the 11th the pulse had fallen to 76, and it was not quite regular; the digitalis was accordingly diminished to three minims.

The patient attended regularly till October 8th, having the same treatment throughout, except that on the 23rd of July the red iodide of mercury ointment was ordered to be rubbed in over the thyroid every night, if possible. When the patient was discharged from treatment she was quite well. I should have been somewhat doubtful as to the possibility of so marked an enlargement of the thyroid coming on so suddenly, and would have thought that probably the goitre had gradually formed, but that the patient's attention had only been attracted to it more or less accidentally, had I not had at the same time under treatment in private a young lady of sixteen, in whom an equally sudden enlargement had occurred. In this case the maid in attendance on the young lady found that a dress which the day before had fitted loosely round the neck was so tight as to be uncomfortable. When I saw the patient three days later, I found a marked enlargement of the thyroid, most pronounced in the right lobe; a tumultuous action of the heart; pulse 112, and prominence of the eyeballs. Under the influence of quinine, strychnia, and digitalis she has steadily improved.

In neither of these cases was there any history of shock or anything else likely to cause the condition in question.

The case in private is a well-marked instance of exophthalmic goitre, and that occurring at the hospital seems to me to be of a similar character, only wanting the protrusion of the eyeballs to be complete. Though the three leading symptoms, palpitation, enlargement of the thyroid gland, and protrusion of the eyeballs usually coexist, nevertheless there are cases in which one or even two of these symptoms may for a time be absent, and yet the disease be very properly referred to the category of exophthalmic goitre.

The other case which occurred in the Throat Department illustrates this point. The patient was a youth, æt. 19, of somewhat feeble intellect and very emotional, especially on religious subjects. He applied on June 18th, complaining of enlargement of the throat and nervousness. The thyroid

gland was found to be generally enlarged, but the right lobe was more affected than left. The heart's action was forcible, but there was no murmur, and palpitation was not much complained of. Pulse 140. The patient was ordered iron, strychnia, and tincture of digitalis, and though the dose of the latter was increased up to twenty minims three times a day, the pulse only once fell to 108. The patient continued under treatment for several months, but there was little or no permanent improvement. In this case the nerves going to the heart and thyroid were probably affected, the nerves of the orbit escaping, and I cannot help thinking that some cases of palpitation of the heart with excessive frequency of action may be a manifestation of the same condition as that which, when present to a greater extent, is capable of causing the three symptoms which are combined in exophthalmic goitre.

PRACTICAL OBSERVATIONS

ON THE

TREATMENT OF EPILEPSY.

By Dr. A. HUGHES BENNETT.

Having had favourable opportunities of studying cases of epilepsy in large numbers, and having taken much pains to watch and record the effects of their treatment on a tolerably extensive scale, I have arrived at certain conclusions, a summary of which may be of interest to the readers of these reports. The question is an eminently practical one and specially suitable for consideration here, as the experience gained has mainly been derived from out-patient practice.

In anticipation it may be stated that as a general result of my personal observations I find myself unable to accept in its full sense the doctrine that the treatment of epilepsy is hopeless as regards prospects either by cure or relief. On the contrary, I am convinced that there is a possibility of the one, and in most cases a certainty of the other. If it is premature to look for recovery in more than a small minority of instances, I am prepared to demonstrate that treatment ameliorates the condition of the majority, and in many to so great an extent as to render the disease com-

paratively innocuous. In short, contrary to the notions of many, I am of opinion that there is no serious chronic nervous disorder so amenable to benefit from direct treatment as epilepsy.

The grounds for this belief consist in observations conducted on a series of upwards of 350 cases of epilepsy under my own care. Each of these was carefully examined in every detail, their clinical condition recorded, and the effects of treatment watched and noted by myself. The observations in detail, the facts statistically arranged, and the conclusions arrived at have been already published.* In the present paper I propose briefly to summarise this experience, and without attempting to lay down a complete or exhaustive system of treatment, to offer such practical suggestions as seem warranted by the experimental inquiry.

At the outset it is necessary to have some general understanding as to what is implied by the term epilepsy, as the expression is an elastic one, the idea it conveys varying according to the definition of different observers. From a scientific point of view epilepsy is not a disease, but only a symptom, which may be the result of a great variety of morbid conditions of the nervous system. Popularly and practically, however, the symptomatic phenomena may in the large majority of cases be said to constitute the malady, as when these are arrested the disease may be considered as absent, the primary lesion being undiscoverable. Whether from known or unknown causes, the epileptic condition may be looked upon as mainly characterised by the development of a series of abnormal paroxysmal explosions of sensory or motor energy constituting "the fits," with intervals of repose between. These are followed or accompanied by a variety of other nervous symptoms, the whole being comprised under the appellation of the "epileptic state." In a certain number of cases this condition is obviously the result of excitation

* "An Inquiry into the Action of the Bromides on Epileptic Attacks." 'Edin. Med. Journ.,' Feb. and March, 1881.

"An Inquiry into the Effects of the Prolonged Administration of the Bromides in Epilepsy." 'Lancet,' May 17th and 24th, 1884.

'A Statistical Inquiry into the Nature and Treatment of Epilepsy.' London: H. K. Lewis. 1884.

of nerve-tissue by gross and demonstrable disease. In by far the larger majority, however, the nature and position of this irritation is totally unknown, and structure is everywhere healthy as far as the means of research which modern science supplies can demonstrate. In these latter we are therefore forced to assume the existence of some abnormal molecular nutrition-change in nervous tissue, the demonstration of which is beyond our powers, to account for the symptomatic phenomena. It is this last class to which the term idiopathic or true epilepsy has been given, and to which I propose to direct exclusive attention in the present inquiry, all instances of paroxysmal seizures due to ascertainable local disease, such as cerebral tumour, &c., being as far as possible excluded.

Again, it is a matter of opinion as to what constitutes an epileptic attack. Without entering into a discussion on this point, it may be simply stated that, for the present, temporary loss of consciousness is taken as an essential feature to establish a fit, and epilepsy has been assumed to exist when paroxysms of these occurred with sufficient regularity and frequency as to warrant a diagnosis of that disease.

Having secured as far as possible a typical case of so-called idiopathic epilepsy, it is obviously a question of the greatest difficulty to estimate with logical accuracy the value of any particular method of treatment. The hereditary and chronic nature of the disease, the total absence of anything like a definite course, and the complicated and Protean forms which it may assume are the main obstructions in that direction. Approximation to the truth is only to be arrived at by the accurate and impartial elaboration of facts carefully observed and recorded in detail. These, while obtained in a manner at the same time precise and systematic, must not on the other hand be too rigidly bound by statistical fetters. While I believe that the statistical method is the true basis for all scientific medical advancement, it must at the same time be supplemented and confirmed by special individual experience. Actuated by some such reasoning and forewarned of the many possible fallacies, I collected my own series of cases. If the general conclusions arrived at are here somewhat dogmatically expressed, it must be remembered that proofs of the assertions

have already been given,* and that space prevents their being again referred to in detail.

The treatment of epilepsy may be considered under two heads:—1. Hygienic. 2. Remedial.

1. *Hygienic treatment.*—A great variety of assertions is made by different authors concerning the beneficial effects of special precautions which should be taken with regard to climate, food, drink, habits, &c. I have been unable to satisfy myself that any of these can be proved to influence in any marked manner the epileptic condition. It is obvious that any definite source of irritation should, when possible, be removed, all depressing agents on mind or body avoided, and the general health and nutrition maintained at the highest level. The utility of any particular regimen I have not been able to confirm, and the abstinence from wine, meat, or other articles depends in my opinion not so much upon the fact of epilepsy being present as upon the special peculiarities of the individual to be treated. Alcohol, for example, might be injurious to one patient and, in moderation, beneficial to another. In short, the hygienic treatment of epilepsy, like that of most other diseases, must be regulated according to general principles and to the constitution of the sufferer, and not limited by any hard and fast laws from the point of view of the disorder itself. The main object is to maintain the mind and body in as good a condition as possible by common sense and attention to the simple and ordinary rules of health.

One special point is of practical importance. Should an epileptic be looked upon as an invalid? Unfortunately, many suffering from this affliction are debilitated in both mind and body, and hence are unavoidably more or less upon the sick list. Moreover, the fact of their having "fits" debars them from retaining most situations in life. At the same time I am thoroughly convinced that it is for the wellbeing of the epileptic, even in confirmed cases, that he should as little as possible be looked upon as a sick man, but should be encouraged to occupy himself both mentally and physically. Bodily exercise is the best means of maintaining robust health and is the most useful outlet for morbid nervous manifestations. Moderate employment for the mind is salutary and constitutes the most efficient distraction from

* Loc. cit.

what is a depressing situation. The epileptic should not, therefore, be debarred from utilising the abilities he possesses as far as circumstances permit. I know of many confirmed sufferers who, in spite of numerous attacks, support themselves and families, and who always express themselves as in best health when they are fully occupied. Not a few persons during the intervals of seizures are sound in both mind and body, of which certain well-known historical characters, such as Cæsar, Mahomed, and Napoleon are examples. On such as these it would of course be absurd to place any restrictions further than those dictated by ordinary prudence. Such individuals would not be recommended to follow the occupation of builders, Alpine climbers, boatmen, coachmen, &c., or such employments as might endanger their own lives or those of others.

2. *Remedial treatment.*—An innumerable diversity of drugs and methods of medicinal treatment has been employed from the earliest times for the relief of epilepsy. Most of these have been found useless, a few of them have been accompanied with partial success. In the salts of bromine we undoubtedly possess the most potent agent against this malady, and their effects are so pre-eminently advantageous as to make the actions of all other remedies insignificant in comparison. My own experience is that if the bromides in sufficiently large doses fail, no other drug proves efficacious. It is again stated that certain agents given in conjunction with the bromides enhance their usefulness. Without being in a position to deny the assertion I have never been able to demonstrate it as a fact.

The action of the bromides in the treatment of epilepsy may be considered from two points of view: I, their effects on the frequency and severity of the attacks; and II, their effects on the inter-paroxysmal state.

I. *Action of the bromides on epileptic attacks.*—As the result of a laborious statistical inquiry elsewhere published,* in which a large number of cases of epilepsy were treated continuously with suitable doses of the bromides for a period of not less than six months, the following general conclusions were arrived at:

* 'Edin. Med. Journal,' Feb. and March, 1881.

1. In 12·1 per cent. of epileptics the attacks were completely arrested during the whole period of treatment by the bromides.

2. In 83·3 per cent. the attacks were greatly diminished both in number and severity.

3. In 2·3 per cent. the treatment had no apparent effect.

4. In 2·3 per cent. the number of attacks was augmented after treatment was commenced.

5. The form of the disease, whether it was inherited or not, whether complicated or not, recent or chronic, in the young or in the old, in healthy or diseased persons, appeared in no way to influence treatment, the success being nearly in the same ratio under all these conditions.

These conclusions, if correct (and great pains have been taken to secure accuracy of observation and deduction), are obviously of much importance. In a notable percentage of cases the attacks were entirely arrested during the whole time the treatment was persevered with, so that the disease may be said to have been practically in abeyance for that period. In none of these cases was there evidence that the epileptic seizures returned, although on this point, as the patients were not seen again, there is, of course, an element of doubt. This is, however, in favour of the non-reappearance of the symptoms, as considering the original success of the treatment it is probable that application would have been made to the same source of relief had the fits returned. In by far the larger proportion of cases treated the attacks were diminished in both frequency and severity, although in varying degrees in individual instances. Apart from other considerations this of itself is a gain to the patient and diminishes the anxiety and trouble of his friends. In only a very small minority of cases had the bromides no beneficial effects on the paroxysms.

What circumstances led to these differences in action is absolutely unknown, or why sometimes in apparently the most chronic and severe forms the results were satisfactory, while in more recent and seemingly less serious cases the beneficial results were not so pronounced. The most careful analysis has failed to discover why some should be more amenable to treatment, or to give any indications which might be useful in prognosis. The explanation is a mere

question of speculation, and is probably to be sought for in obscure differences in the pathology of the disease too subtle for our present means of discrimination. The fact remains that, taking all genuine instances of epilepsy without selection, the effects on the attacks of the bromides in continued and suitably arranged doses are those above indicated.

In connection with this question certain special points which have been determined in the course of my observations may be here referred to. It is, for example, commonly asserted that the "*petit mal*" is more intractable by the use of the bromides than the convulsive forms. Although I am not prepared from my own experience to prove the contrary, I have demonstrated that the first is largely benefited by those drugs which reduce both the frequency and severity of the attacks. This remark applies also to the nocturnal as compared to the diurnal form of the disease, although the former is generally supposed to be less amenable to relief.

Again, the fact of the disorder being hereditary and existing in other members of the family does not appear to make any essential difference as to the prospects of success. The age at which the patient is attacked also seems in no important manner to prejudice the effects of treatment, elderly persons often deriving as much benefit as the young. Failure in the general health or other complications of the malady in the same way is not found to materially influence its progress in an unfavourable manner.

A still more remarkable feature connected with this mysterious condition is the fact that the bromides exercise their influence in chronic as well as in recent cases, and many instances might be cited in which the attacks of epilepsy were arrested after they had existed for ten or more years. In short, it is impossible to determine what circumstances, apparently favourable or unfavourable, are likely to modify beneficially or otherwise the phenomena associated with this singular nervous disorder.

II. *Action of the bromides on the inter-paroxysmal state.*—Admitting that the bromides modify and control the number and severity of epileptic seizures, the questions arise, what are the effects of their prolonged administration on the inter-

paroxysmal state, and on the general health and constitution of the patient, and what are the prospects of their effecting a permanent cure of the disease? It is very generally believed that these drugs, while beneficent in one direction are injurious in another, and that in large and long-continued doses they are detrimental to both mind and body. Considering the important issues involved, this assertion merits careful analysis, as a clear comprehension of the truth is obviously of the greatest practical moment. The solution of the problem is, however, by no means easy, as we have to discriminate between the phenomena of a complex and uncertain disease on the one hand, and the toxic actions of a drug which specially affects the nervous system on the other. As these present many features in common, great care is required not to confound the one with the other, and thus mistake cause for effect. Epilepsy, as is well known, is frequently associated with a variety of morbid nervous symptoms both physical and mental. Impaired general health, deficient bodily vigour, disordered functions, feeble circulation, intellectual deficiency, and so on, are common accompaniments of this disease. Very similar conditions may arise in an otherwise healthy person under the influence of bromism. When the two are combined it will obviously be difficult to differentiate between them; hence confusion has arisen as to whether an individual symptom is to be attributed to the disease or to the poison. The distinction, I apprehend, is only to be determined by the experience derived from the laborious and minute investigation of a large number of cases, extending over long periods of time. Following this method I have collected a series of 141 cases of epilepsy, each of which has been continuously under the influence of the bromides from periods varying from one to six years. The details of this inquiry have been elsewhere published.* The general conclusion arrived at was that the drug, while controlling the attacks of epilepsy, did not appear in the large majority of cases to injuriously affect the mental or physical condition of the patient, even when taken in long-continued large doses. Only in a small percentage of instances was there evidence of depression or other adverse conditions

* 'Lancet,' May 17th and 24th, 1884.

accompanying treatment, and even then there was no positive proof that these symptoms were due to the remedies and not to the ordinary sequences of the disease itself. On the other hand, there was abundant demonstration that many of these very troubles, such as nervousness, irritability, headache, tremors, &c., were relieved by the treatment. It cannot be denied that occasionally the toxic effects of the bromides prove troublesome, but this in my experience is exceptional and is far outbalanced by their ordinarily innocuous action.

As a practical illustration to show that no necessary harm follows the prolonged administration of the bromides in epilepsy, I may mention that at the present time I have under observation four patients who have taken one and a half drachms daily without intermission for the last seven years. All of these are in fair physical and mental health, and are earning their living in spite of occasionally recurring attacks. The case, also, of a young man may be cited who during the last six years has consumed over 100 lbs. weight of the drug, and who although originally somewhat weak in mind is now much better in every respect than he was prior to treatment.

When symptoms of bromism arise in the epileptic they are as a rule neither severe nor permanent. It has also been observed that the tendency diminishes as the patient becomes habituated to the use of the drug, the toxic effects always being most marked at the beginning of treatment. These gradually subside although administration of the remedies is continued.

A general view of this question has led me to the conclusion that the epileptic constitution is more tolerant of the poisonous action of the bromides than the healthy system. The most severe toxic effects are to be seen in those who are not the victims of this malady. The explanation of this must be entirely hypothetical. It may, perhaps, be assumed that in the morbidly hyperexcitable condition of the nervous system which accompanies or underlies epilepsy, the usual depressing effects of the bromides is not so prominently developed as it is in more stable organisations. Whatever theory be adopted, the fact remains that while large and long-continued doses of the bromides reduce the mental and bodily vigour of the ordinary patient, in the epileptic the depressing

symptoms are not so pronounced; on the contrary, the treatment frequently relieves many of the nervous manifestations caused by the disease.

Finally, this important question arises: granting that the bromides temporarily relieve the symptoms of epilepsy, will their prolonged administration lead towards the permanent eradication and ultimate cure of the disease? An answer to this question can only be given authoritatively by those who, added to a large experience of the malady extending over a long period of time, have had opportunities of keeping their patients in view for many years, and who have carefully observed and recorded their cases. Personally I am not prepared to offer data sufficiently extensive to prove of value in elucidating this point, nor am I aware of the existence of any series of facts, scientifically observed, which definitely settles the question. Further research and knowledge on this important particular is therefore urgently demanded, and its investigation would well repay those whose opportunities are favourable to such an inquiry. It is the family doctor, retaining relations with his patients throughout their lives, who is eminently qualified to throw light on this subject, and a collective scrutiny by such men would doubtless supply very valuable information. In the meantime we can only be guided by general principles. Epilepsy as a result of gross organic disease or confirmed structural change in the nerve-centres can scarcely be expected to permanently recover under the use of drugs which only suppress a symptomatic manifestation, and which in no way influence the original lesion. But when this is represented by such delicate nutritive or molecular changes as to be beyond our powers of detection there is no reason to doubt that there is a possibility of recovery. Clinical observation has demonstrated that frequent explosions of nerve energy by themselves encourage the further development of phenomena of a like nature. If, therefore, hyperexcitability is allayed by artificial means, the tendency to abnormal response to casual stimuli is diminished, and thus the production of paroxysms averted. The continued suppression of these sources of central excitation leads to repose and is favourable to a healthy transformation of tissue. It has already been

pointed out that in 12·1 per cent. of epileptics the attacks were completely arrested during the entire time the drugs were being administered, and that in a much larger number they were greatly modified in number and severity. It has been further shown that the remedies themselves, even when in use for long periods, are in themselves practically innocuous, while at the same time they continue to maintain their beneficial effects on the attacks. It therefore follows that a sufficiently prolonged treatment might in a certain number of cases be succeeded by permanently curative results.

ON

SOME CASES OF QUIESCENT TUBERCLE.

By Dr. R. G. HEBB.

Consideration of the histological appearances of tubercle imparts the notion that there is always a tendency towards the formation of fibrous tissue, and hence a disposition to the arrest of the disease. How unfrequently this desirable termination occurs may be gathered from the records of post-mortem examinations, and yet it is not to be wondered at that a progressive disintegration of the neoplasm, beginning from the centre and spreading outwards, should nearly always be the result of its continued growth. For notwithstanding that every tubercle inherits this tendency to cicatrisation, its very growth by its excess strangles it and is one of the causes of its speedy death. The struggle between the opposing forces almost always ends in the victory of the destructive side, although the bulwarks raised by the conservative element may delay disorganisation for awhile. Yet this result is not invariable, and the following cases, interesting also for other reasons, offer examples of the condition where the disease has become quiescent, and has remained so probably for a considerable time. I state the first case more in detail than the others, partly because the conditions

of things therein described find their exact counterpart in the other cases; partly because it was this which first drew my attention to the subject. And here I may mention that these are the only instances in which this condition of lung has occurred to me during the past five years at the Westminster Hospital. I describe indeed a lung malady, the disease-elements of which in no way differ from those secondary products of pulmonary phthisis to be found every day on the post-mortem table;

> "But there
> I doubt all likeness ends between the pair."

for the anatomical arrangement of the disease-elements differs just as much as their results.

I do not propose to go outside these cases for illustration purposes, nor to enter upon any pathological disquisition on the life-history of tubercle, nor even to attempt to define a tubercle in so many words, but I may take this opportunity of pointing out that it is not wonderful that anyone should conceive himself gifted with ability to frame a definition of tubercle when we consider the likeness that exists between these growths, if comparison be made under fairly equal circumstances; the collection of indifferent cells, increasing by peripheral growth, passes through a stage of semi-organised adolescence to an existence of prolonged maturity, the chief characteristic of which is fibrosis, or to a short old age marked by progressive softening and disintegration.

And that the histological appearances should bear a striking family likeness may also be understood when we reflect that the causative irritant, be it what it may, has only the same anatomical material to work upon in any given place and the same histogenetic material to work with. Consequently, the differences in the result must largely depend on some difference in the quality of these materials. I say "largely" depend, because the quality of the causative irritant which, as a question, is still *sub judice,* must have a certain influence in determining the actual result.

I now turn to the cases themselves. The first is that of Charles B—, æt. 48, who was brought in dead to the Westminster Hospital, December 31st, 1882. Beyond the fact

that he had been in the army for about sixteen years and at the time of his death was engaged on night duty at the Admiralty, no information relative to his medical antecedents was obtainable. The post-mortem examination was made January 1st, 1883. The body was well nourished and there was nothing abnormal visible on inspection. On opening the thorax the pericardial sac was seen to be much distended and was found to contain rather more than ten ounces of black clot. Just within the line of reflection of the pericardium from the aorta was an aperture which admitted the passage of a very fine probe. This opening led into a circular aneurysmal pouch situated on the front of the aorta and immediately to the right of the pulmonary artery. The aneurysmal circumference was about equal to that of a florin. Its lowest margin was one inch from the aortic valves. Elsewhere the lining membrane of the aorta was smooth but easily stripped off. The muscular tissue and valves of the heart were perfectly normal. The right pleura was smooth and shining; the right lung emphysematous. There were a few old but slight adhesions over the left lung, which was puckered at irregular intervals from apex to base. On section of this lung a fine firm network was found to ramify, more or less generally throughout, although its quantity diminished somewhat towards the base. In colour it was jet black with a whitish reflection in certain lights. There was no trace of caseation or of softening in any part of this or the other lung. Sight and touch imparted the notion of a finely-beaded meshwork acting as the framework for the pulmonary tissue. Above the root of the left lung was a dry and calcified gland which broke down into a gritty sand on being handled. The other mediastinal glands appeared to be quite normal. The abdominal viscera were perfectly healthy. The inguinal glands were somewhat enlarged.

The second case is that of Maud H—, æt. 33, who was admitted under the care of Dr. Donkin May 6th, 1884, and died next day. On post-mortem examination, it was noted that the body was well nourished, that in the right thorax there was chronic pleuritis with universal adhesion, and that in the left thorax there was a similar condition, but the adhesions were less numerous. Both lungs were puckered at

the apices, and in many places in both were areas of pulmonary tissue supported by a fine black network, at the interstices of which were small nodules. At the root of the aorta was an aneurysm, the size of a hen's egg. The aneurysm communicated with the pulmonary artery by a round opening. The aorta was very atheromatous. The abdominal viscera were "cardiac."

The third case is that of William B—, æt. 40, who was admitted under the care of Dr. Donkin, March 29th, 1884. Died April 16th, 1884. The post-mortem notes which I abstract show that there was chronic pleuritis, with some adhesions on both sides. The bronchial mucous membrane was inflamed, the lungs œdematous, and scattered throughout the pulmonary tissue were patches of "quiescent tubercle." These areas consisted of a fine black network with nodal points. There was no trace of caseation. The aorta was atheromatous and there was a small aneurysm of the descending arch, and vegetations on the aortic valves. The vessels of the pia mater were atheromatous, and the abdominal viscera "cardiac."

The fourth case is that of Edith C—, æt. 58, who was admitted under Mr. Macnamara on November 8th, 1884. Died November 24th, 1884. The post-mortem examination showed the body was fairly well nourished, that there were fracture of the base of the skull and acute meningitis. The left clavicle was fractured at its centre, and the broken ends immersed in an abscess communicating with the left pleural sac, which was in a condition of acute inflammation. Both lungs were the seat of old "quiescent" tubercle; the appearance of the network resembling exactly that in the three previous cases. There was no caseation or softening in the thorax. The right thyroid lobe was the seat of old and recent hæmorrhagic extravasation.

The fifth case was that of a woman, apparently about fifty years of age. The post-mortem examination was made by me at the request of Dr. Sylvester, of Westminster, on March 31st, 1885. Death had evidently resulted from starvation, of which there were the usual signs. The body was extremely emaciated, but there was no trace of active or recent disease anywhere. There were some adhesions at

the apices of the lungs, but elsewhere the pleuræ seemed normal. Throughout both lungs ramified a black network, at every intersecting point of which was a nodule. The intervening pulmonary tissue was apparently quite normal. One or two mediastinal glands were represented by collections of dry sandy grit. There was one small calcareous plate in the aorta; elsewhere this vessel seemed quite healthy. There was nothing worthy of note in the heart, or in the abdominal or pelvic viscera.

Microscopical examination of the black network and the nodal points showed that the former was made up chiefly of fibrous tissue, and that the latter were quiescent tubercles. The tubercles were for the most part composed of fibrous tissue, the layers of which were concentric: they were all the seat of much black pigment. There were numerous giant-cells, and the tubercles had a greater or less number of small, indifferent well-staining cells surrounding them. There was no trace of softening. The pulmonary tissue enclosed within the black network seemed fairly normal. Furthermore, special examination was made of the cases of Charles B—, Maud H—, and William B—, for bacilli. No trace of a bacillus was found by me in any of them, and, in the case of Charles B—, the absence of micro-organisms was confirmed by Mr. Jennings Milles, F.R.C.S. From the above it may be seen that there is a remarkable agreement between the macroscopical and microscopical appearances.

It may be well to pass in review the most noteworthy points of these cases. In the first place, associated with this healed or quiescent condition of the tuberculous network is the fact, especially interesting at the present time, that a careful examination of the lung in the first three cases failed to reveal the presence of bacilli. As the knowledge of the exact relation of bacilli to tubercle is still in its infancy, it would be premature to speculate on the bearing of these cases in that regard, or to jump to the conclusion that as no micro-organisms were found none were ever present. Nevertheless, their absence is a very significant fact and is suggestive of at least two alternatives. Either they have never existed, or if so, they have been obliterated by the curative process. Either supposition is consolatory, for

in the one case it is satisfactory to find that an acute tuberculosis may occur without the aid of a specific micro-organism, and in the other that such microbes may be suppressed.

Again, in the first three cases it will have been remarked that there was aneurysm of the aorta. Of course, the connection of an attack of acute tubercle of the lung with the later development of an arteritis can only be accidental, but it suggests the query whether the condition which gives rise to arteritis may not be one which is antipathetic to tuberculosis. This, indeed, was my first speculation, but the last two cases do not, of course, strengthen this notion, for the woman who died of starvation must have had a severe attack of acute tuberculosis affecting both lungs equally, and this (practically) without any evidence of arteritis. And, as far as the lungs were concerned, all these cases may be regarded as having seen the light through accident, the cause of death not being even remotely associated with the pulmonary organs.

And I would again direct special attention to the fact that in none of the five cases was there any trace of softening or breaking down, and that some of the mediastinal glands were dried up and represented by a sabulous grit. In all five cases the disease had evidently had an acute onset; there had been in fact an acute tuberculosis, but a tuberculosis which rapidly passed into a quiescent state,—a tuberculosis without tendency to a changeful chronicity; a tuberculosis which had stopped short of phthisis.

It will have been seen from the description of the tubercles that they may be classed under the head of "fibroid" tubercle. Yet their distribution was not such as is found when fibroid tubercle occurs in chronic phthisis. Segregation rather than aggregation would indeed describe their arrangement, which differed in no way from those cases of acute tuberculosis where the granulations are disseminated fairly equally throughout the lungs; and in this I see another valid argument for the opinion that in all these cases the lungs had recovered from an attack of acute tuberculosis.

It would have been of increased interest if the previous history had been available to throw some light on the length

of time the tubercular network had existed. Unfortunately, however, in three out of the five cases no history could be obtained, and in the remaining two there is no reference in the clinical records to any antecedent pulmonary disease. But still there can be no doubt that a considerable period of time must have elapsed since both the onset and the termination of the disease. On the other hand, the absence of recorded illness pointing to a previous affection of the chest may perhaps remind us of the numerous cases of really severe disease the symptoms of which seem too trivial to call for notice when the sufferer has his bread to earn.

It is almost needless to point out the lesson to be derived from these cases. Pulmonary tubercle may become perfectly healed, and that too where the whole of both lungs has been implicated. Now, in ordinary cases of chronic phthisis, cicatrisation of the lung occurs often enough. Everyone has seen this. Here, however, Peter has been robbed to pay Paul. The rest of the pulmonary tissue suffers and the disease proceeds to its usual termination. In the cases under review the cicatrisation has been limited to the parts first attacked, and the rest of the lung tissue has remained unaffected.

A CASE OF RENAL CALCULUS

WITH

COMPLETE RECOVERY AFTER THE CALCULUS HAD BEEN EXCISED BY THE LUMBAR OPERATION.

By H. B. DONKIN,

AND

C. MACNAMARA.

(Notes of the Case taken by W. A. WILLS, Clinical Clerk, and T. J. MORGAN, Dresser.)

Esther S—, widow, æt. 34, a domestic servant, was admitted into Tillard Ward under Dr. Donkin, on October 21st, 1884, complaining of pain in left lumbar region, "shooting right through the body, and down the leg to the knee." This pain was not constant, but occurred several times in a day.

These symptoms had been noticed for about two years, coming on, she thought, after a cold. The pain was at first so severe that the patient was obliged to take to her bed. She has never been perfectly free from pain from the beginning. She suffered much from going upstairs, and has given up most of her work for two years, though she has taken to her bed only twice for a few weeks during her illness. Since September she has been much worse and forced to give up work altogether. The quantity of water

passed has been less than before, and the water has been often loaded with "gravel" and red in colour. The eyelids have been sometimes puffy in the morning, and the ankles slightly swollen in the evening.

She has had no illness except facial erysipelas once, and her family history shows nothing of note.

On admission, the patient was of healthy appearance, though her face had the aspect of one in pain. There was a continuous aching pain in the left side. In the left hypochondriac, iliac, and lumbar regions there was great tenderness on pressure, preventing deep palpation. The urine was 1030, acid, with a trace of albumen; and microscopic examination showed pus-cells, epithelium, and some few hyaline casts stained a brownish colour.

There was no evidence of disease in any other organ or system of the body, and the temperature was throughout normal or subnormal.

From the date of admission to November 7th the patient remained about the same, passing from one to two pints of urine a day, containing a few pus-cells, and abundant bacteria.

On November 7th she had a severe attack of pain in the left iliac region. She coughed for some minutes and then felt "something suddenly give way," and the pain ceased. The tenderness seemed now more limited to a spot about an inch above the left iliac crest.

On November 15th, the original symptoms still continuing, she was examined under ether. No physical sign of any disease was found in pelvis or abdomen, beyond a doubtful slight fulness above the iliac crest.

The diagnosis of a renal calculus having been made and adhered to, it was determined by Dr. Donkin to ask Mr. Macnamara to operate for the purpose of exploring the left renal region and removing the calculus if found. The patient was accordingly removed to Chadwick Ward on Nov. 20th, and placed under the care of Mr. Macnamara.

On December 3rd, ether having been administered, Mr. Macnamara proceeded to perform the operation of nephrolithotomy under strict antiseptic precautions. An incision about five inches in length was made from over the last rib

to the crest of the ilium, and the outer edge of the quadratus lumborum muscle having been exposed, there was no difficulty in reaching the left kidney, which was found to be enlarged, but otherwise healthy. A small hardish mass like an indurated gland was felt in or near the pelvis of the kidney, but on puncturing this little tumour no stone could be detected as it was then situated deep in the wound. Mr. Barrow, who was assisting at the operation, seized the tumour and brought it towards the surface of the wound, and Mr. Macnamara then succeeded in firmly fixing it in this situation by means of a pair of forceps, and having again probed the mass, discovered a calculus in it. The tissues covering the stone were incised, and the calculus removed without difficulty. The opening in the pelvis of the kidney was carefully closed by means of sutures of carbolised catgut. A drainage-tube having been inserted into the wound the edges were brought together by sutures of silver wire. Iodoform was dusted over the wound and the usual gauze dressings applied.

The stone, consisting of uric acid, was of a dark colour outside; its surface was smooth; it weighed 165 grains.

December 6th.—The patient has since the operation suffered much from vomiting and pain, but this latter symptom is largely owing to the menstrual period having come on, at which time she always suffers. The dressings were changed to-day, the wound looks perfectly healthy, and there being no discharge the drainage-tube was taken away. On the 8th the sutures were removed, and the wound had almost entirely healed.

12th.—The patient's temperature ran up, and she had a slight rigor with rapid breathing, and pain in the left side of chest. On removing the dressings urine and a purulent discharge were found to escape from a small opening at the lower part of the original wound.

24th.—The patient's temperature continued high, and Dr. Donkin having found signs of some pleural effusion on the left side advised a puncture being made into the pleura, and a very small quantity of pus was drawn off by means of the aspirator.

30th.—A free opening was made through the original

wound down towards the kidney, and a large-sized drainage-tube was introduced. From that time the patient's general condition began to improve, urine, however, escaping freely through the opening which had been made.

As the wound granulated up the size of the drainage-tube was lessened, and in a month's time discontinued. The discharge of urine through the fistula became less, and ceased before the patient left the hospital on March 23rd. E. S— returned to visit Mr. Macnamara at the hospital in May; she had again taken service and was looking robust and strong; in fact, as she remarked, she was free from pain and perfectly well.

Remarks by Dr. Donkin.—In spite of the absence of the history of blood or crystalline deposit in the urine throughout this case, and the failure to find any evidence by palpation of a tumour or enlargement in the renal region, the diagnosis of renal calculus seemed to me to rest on a very sound basis. The main facts in its favour were the paroxysmal pain (of the recognised nature of renal colic), the localized and ever-present tenderness in the left lumbar region, and the frequent evacuation of pus, though in very small quantities, in the urine. The patient, moreover, complained of much increased pain when moving, especially on going upstairs—a symptom not uncommon with a large stone in the kidney—and also of a diminished quantity of urine for some time. From all these symptoms, and from the absence after careful search of all evidence of disease elsewhere in the body, I came to the conclusion that a calculus of considerable size was lodged probably in or near the orifice of the left ureter. The smoothness of the stone, found in this situation, and the complete cessation of all of the old symptoms immediately after the operation (indicating a satisfactory removal at present of all offending bodies) quite accord with the non-appearance of blood in the urine. The absence of hæmaturia is often made of far too much importance, owing to the common habit of recalling the stereotyped lists of symptoms in text-books or other Aids to diagnosis rather than of indulging in a little reflection as to what the meaning of such symptoms may be, and how they are related to an individual case.

Of the beginnings of the symptoms in this case I have nothing to say, the history of the patient and her surroundings throwing no more light on the subject than we find in so many instances of this affection.

The completely successful result of the operation gives much encouragement to physicians to prescribe surgical treatment in cases such as this. The severe and ever-recurrent pain from which the patient suffered, disabling her from work and spoiling her life, was surely sufficient reason for even a risky operation with much less chance of success than in the present case. Physic is powerless to aid except by narcotism. But the absence here of any notable tumour, and a normal temperature throughout the case—rendering it at least improbable that much local or inflammatory damage had taken place—were no small factors in the hope formed as to the result of the interference.

Such interference, however, when we have to do with important internal organs, is often too late to be completely successful if only called in at a time when all would admit it to be absolutely necessary.

Remarks by Mr. C. Macnamara.—From a surgical point of view the first question we had to determine with reference to this case was whether we should reach the kidney by means of an incision through the lumbar region, or from the front of the abdomen, as for an ovariotomy. I preferred the lumbar incision, because, however clear it may seem that a renal calculus is the cause of the symptoms from which a patient suffers, we cannot be sure of the existence of a stone in this locality until we actually feel or see it there. For the purpose of exploration the lumbar incision is clearly preferable to one through the front of the abdomen. I was confirmed in my idea as to reaching the kidney through the loins because in this instance there was no evidence of the existence of *disease* in that organ; and I had determined if possible to remove the calculus, should I find one, and leave the kidney. After dividing the tissues through the loins down to the kidney I found that organ apparently enlarged but otherwise healthy, so far as I could judge. There was a small well-defined hard mass about the size of a walnut in connection with the pelvis of the kidney. But on probing

this lump with a long needle I could not detect a calculus. My impression is that the point of the needle passed through the thickened walls of the pelvis of the kidney or tissues surrounding the calculus. Mr. Barrow, however, seized the small tumour and brought it towards the surface of the wound, expressing his opinion that it felt like a calculus, and in this position I was able to convince myself that it contained a stone, which was cut down upon and removed without difficulty. Before opening the tissues surrounding the calculus I seized and fixed the small tumour with a pair of bull-dog forceps, my object being, after incising the structures through which the stone was to pass, to keep the edges of the wound well in sight, and thus be enabled to close it effectually by means of sutures of carbolised catgut.

The wound in the skin and subjacent tissues healed by the first intention, but then the catgut ligature in the pelvis of the kidney probably gave way, and so extravasation of urine took place into the cellular tissue of the lumbar region; this event gave considerable trouble, but ultimately the urinary fistula which formed entirely healed, and the patient regained perfect health, returning to service.

This case adds another to the list of successful nephrolithotomies. The age of the patient, her good family history and general health, seemed all in her favour, and the operation was not too long delayed. The case is therefore interesting, principally with regard to the wound in the pelvis of the kidney, for I take it as being unwise to remove a healthy kidney of this kind in the first instance. In any other case I should be inclined to employ very fine silver wire sutures to bring the edges of the wound in the pelvis of the kidney or of the ureter into apposition. These sutures should be sufficiently numerous to prevent the chance of urine percolating through the wound in the pelvis of the kidney into the surrounding tissues. Either very fine silver or a continuous silk suture might be left in the wound, and would not yield as I think the catgut ligature did in the case above recorded. Further, I should employ very free drainage from the kidney and ureter outwards for at least fifteen days after the operation. Lastly, the quan-

tity of fluid swallowed by the patient might be limited as much as possible so as to diminish the amount of urine secreted by the kidneys.

I think that in these cases of operation for renal calculus where a urinary fistula may form, and fail to close, say within six months, the kidney may very well be excised then. A proceeding of this kind, though not altogether satisfactory, commends itself to my mind rather than that of excising a healthy kidney at the time of performing the operation for the removal of a calculus.

REPORT

OF THE

DEPARTMENT FOR DISEASES OF THE SKIN.

1884.

By Dr. T. COLCOTT FOX.

In the year 1884, 920 new cases presented themselves for treatment, excluding relapses and second attendances after some interval of absence. For this considerable field of study I am in a great measure indebted to my colleagues and predecessors Mr. Bond and Dr. Allchin, whose services were so highly appreciated by the poor seeking relief in this department. The following alphabetical list accounts for the majority of the cases, but many of the records are not forthcoming for various reasons. I propose to append a few remarks upon some of the more interesting cases.

Acne vulgaris	29	Erythema multiforme	5
Alopecia areata	17	„ nodosum	2
Canities præmatura	1	Furunculus	2
Dermatitis	39	Herpes facialis	5
Ecthyma	13	„ iris	3
Eczema	176	„ zoster	7
Erysipelas faciei	1	Hyperæsthesia capitis	1
Erythema læve (with anasarca)	2	Ichthyosis	3

Impetigo contagiosa	48	Rosacea	10
Intertrigo	1	Rötheln	1
Keratosis pilaris	2	Scabies	96
Leucoderma	2	Scleroderma	1
Lichen planus	6	Scrofuloderma (glands)	1
„ scrofulosus	1	Seborrhœa	12
Lupus erythematosus	2	Strumous hypertrophy of upper lip	1
„ vulgaris	2	Sudamina	2
Miliaria	7	Sycosis	4
Molluscum contagiosum	2	Syphilis	69
Morphœa	2	Telangiectasis	1
Nævus	3	Tinea trichophytina	100
Pediculosis capitis	50	„ versicolor	11
„ pubis	1	Ulcus	5
„ vestimenti	42	Urticaria	5
Perionychia	1	„ papulosa et pustulosa	13
Pityriasis rosea	2	Varicella	8
Prurigo Hebræ	2	Varicose veins { Eczema	4
Pruritus senilis	1	Varicose veins { Ulcus	6
Psoriasis	54	Variola	2
Purpura	5	Verruca	3
Raynaud's disease	1	Wen	1

Twenty-seven cases of alopecia areata came under notice. Without exception they were individuals of spare habit. The appended table serves to show the prevalence of the affection in children and in those with dark brown hair, the liability to recurrence throughout life, and the attack of more than one member of a family. The latter point is of interest in connection with the etiology, and I believe it points to a family predisposition to a special nerve trouble and not to any parasitic causation. I have never yet detected any parasite, but always found in the ordinary chronic cases comprised in this table the characteristic swelling and fracture of the hair-shaft with atrophy of the succeeding portions, leading to the fall of the stumps. In all the cases there was distinct wasting of the diseased areas. In the woman aged 48, the early stages of formation of the patches were accompanied by marked itching, and the man, aged 29, complained of intolerable itching all over his face, neck, and head, and of a tickling sensation down his nose. In one boy of thirteen the alopecia was accompanied by chorea, and in another, aged 11, by rheumatic nodules. I have on two other occasions at the Victoria Hospital for Children

noted the coincidence of chorea and alopecia areata. In one family there was a history of alopecia in three sisters, whilst the brother had typical universal leucoderma, to which I have made further reference under that heading.

Lastly, I must notice the concurrence of ordinary ringworm and alopecia areata or of circumscribed atrophy of the scalp in the same person, an interesting fact which I have noticed several times, and which has been recorded by others. Favus may lead to extensive scarring or atrophy of the scalp, but in that case can be easily accounted for. Whether in ringworm the growth of the fungus or the application of remedies starts an atrophic process in certain cases is not clear, nor am I quite certain whether the concurrent disease is true alopecia areata, but I believe so, chiefly because the patches of ringworm and atrophy were not coterminous.

Cases of Alopecia areata.

Sex.	Age.	Colour of hair.	Number of attack.	Others in family affected.	Remarks.
♂	11	Dark brown	First	No	2 months' duration.
♂	6	Chestnut, blue eyes	"	No	4 months' duration; dyspeptic; strumous nose.
♀	12	Brown	Relapse	No	Irreg. catam.; pains in limbs.
♀	6	Dark brown	First	Said to be others at the school	Sick in the mornings; anæmic.
♂	8	"	Relapse	Sister	Very extensive; healthy looking; 4 years' duration.
♀	6	"	First	Father affected in boyhood	2 years' duration; extensive.
♀	10	Brown	"	No	—
♀	8	Light brown	"	Sister, aged 20, off and on since 8 yrs. old; another, aged 17 yrs., at 8 yrs. old; also the mother off and on since 8 yrs. old	Constant headache since attack.
♂	4	Fair hair, blue eyes	"	No	—
♀	14	"	"	No	Anæmic and dyspeptic.
♀	15	Dark brown	"	No	Anæmic and constipated.
♂	13	"	Recurrent	No	Choreic.
♂	11	Very dark	First	No	—
♂	12	Brown	"	No	Very excitable; family very "nervous."
♂	6	Dark	"	No	—

Sex.	Age.	Colour of hair.	Number of attack.	Others in family affected.	Remarks.
♂	29	Very dark	First	No	Intolerable itching all over face, neck, and head, and trickling sensation down nose; 13 mos.' duration; began on each side of chin after mussel poisoning.
♀	48	Reddish-brown	Had it also in her teens	Brother had it at 30 yrs. of age, but not at same time as sister	Great itching when patches are coming.
♂	12½	Dark brown	First	No	—
♂	11	"	First, relapsed later	No	3 years' duration; very pallid, rheumatic fibroid nodules of ear and extensor tendons of fingers.
♂	18	—	First	No	Very pallid and overgrown; nearly universal; 6 months' duration.
♀	13	Light brown	"	No	Duration 1 year.
♂	2	—	"	Sister	Both these cases began as ordinary ringworm, and, with a short interval, alopecia areata set in suddenly in both, and cured them of the ringworm.
♀	10	—	"	Brother	
♀	22	All dark brown	Recurrent from 7 yrs. till 20 yrs. old, now again a relapse after confinement	A younger sister now has it, and an elder married sister had it for 2 to 3 years some time ago	Very nervous and pallid. A younger brother has a typical universal leucoderma with white patches of hair.
♀	6	Dark brown	First	Yes	Pallid.
♀	14	"	Second	Yes	1st attack 7 years ago.
♂	12	"	"	Yes	—

Dermatitis and impetigo contagiosa.—Under the term dermatitis I include all such cases of simple inflammation of the skin, frequently indistinguishable from eczema anatomically, which are distinctly local affections and not dependent on a special constitutional derangement as I believe true eczema to be. For instance, I apply the term dermatitis to the inflammation arising from a burn, a scratch, an excoriation, and from any irritating substance, such as acrid pus, croton oil, or the poison sumach. Numbers of children present themselves with localised eczematous-looking patches of inflammation from pus inoculation, festering scratches, &c., but, though the anatomical lesion may be similar in

eczema and dermatitis, the two are to be distinguished, if possible, as much as traumatic and rheumatic synovitis. With this class of lesion impetigo contagiosa is closely associated. I have already expressed my conclusions at length in the 'Medical Society's Transactions' for 1884, to the effect that the vesico-pustules constituting this affection are traceable to the inoculation of pus from one person to another, from such sources as purulent otorrhœa, nasal catarrh, and excoriations, &c., and I can now confirm Dr. J. F. Payne's observation that it may originate from stomatitis. Almost all the cases here reported were traced to some such source, and it frequently happens that from the first case the other inmates of the house or numerous children in the street or school are infected, either directly or from furniture, caps, towels, and so on.

Ecthyma.—Under this heading thirteen cases are included which require a word of explanation. I teach that the ecthymatous lesion is nothing more than a variety of large pustule as impetigo is of the small, thus corresponding to a tubercle and papule, or a bulla and vesicle. So the miliary papule of syphilis may develop into the acneiform pustule, and the large papule or tubercle into the ecthymatous syphilide. The old idea of impetigo as a separate disease is done with, and Hebra tried to do the same for ecthyma. The great majority of ecthymatous pustules occur as complications of impetigo contagiosa, scabies, and phthiriasis, and the thirteen cases left standing as ecthyma are those not traced to any such origin.

Eczema.—Amongst the 176 cases of the special type of inflammation of the skin called eczema, from which I exclude patches of artificially induced dermatitis and impetigo contagiosa, were illustrations of every variety of this affection from infancy to eighty years of age. The tendency to symmetry, to recurrence, to chronicity, to more or less widespread distribution, and the accompanying constitutional disturbance were frequently seen. One of the most interesting local developments is that on the hands. On the backs of the hands and feet and between the fingers it is of common

occurrence in association with eczema of the limbs or face; less frequently it is localized to the dorsal surface, or extends between the fingers or over the ball of the thumb. Further, eczema is recognised as occasionally attacking the palms or soles only, almost invariably both right and left together, though one perhaps more intensely than the other. It is not so well understood, however, that in this region as elsewhere we may see all or any of the different stages of the inflammation, erythematous, papular, vesicular, pustular, or squamous eczema. Vesicular eczema of the palms and soles is of great interest in relation to the disease described as dysidrosis. Two very interesting illustrative cases were seen in the department in the summer months, and I confess myself totally unable to separate any such disease as dysidrosis from vesicular eczema, chronic or acute, of the palms or soles. Localized eczema of this region is very possibly excited oftentimes by the functional activity of the sweat glands, and the formation of *multilocular* bullæ is due to the retention of the serous exudation under the thick skin. Hardy long ago discussed this point.

Erythemata.—The erythematous inflammation, which is a simple type, but of rarer occurrence than eczema, probably has constitutional relations, *e.g.* rheumatism, which are different from those of eczema. As in the latter affection, the effusion may occasion a red macule or papule or lead to the formation of vesicles, bullæ, or pustules, but vesication in eczema may be regarded as the typical outcome of the inflammation, whereas in erythema it is exceptional. The pin-head lesions characteristic of eczema when once formed do not sensibly enlarge at their periphery, but in erythema the lesions are from the first larger and have a strong tendency to spread peripherally, and, the inflammation declining in the centre, rings are often formed. The red of erythematous eruptions have a very characteristic family tint and there is a marked tendency for red blood-corpuscles to outwander in unusual quantity, and break up so as to give rise to successive changes of colour in the waning lesions. The local symptoms are different in the two classes. In both there is a notable tendency to bilateral evolution and

symmetry, and recurrence, but, whilst eczema inclines to become chronic, erythema is exceptionally so, and each class of inflammation has its special sites of predilection. I have seen the superficial nature of the erythematous inflammation pointed out, but it was not always so, for the dermis may be involved in all degrees from the macular erythema iris to the lumpy E. nodosum or tuberosum.

The varieties of the erythematous class were fairly well illustrated by ten cases which may be briefly noticed. (1) Erythema iris, consisting of delicate discoloured erythematous macular rings on the arm of a youth of seventeen: and (2) Erythema circinatum, or slightly more marked circular macules or maculo-papules on the face, neck, and backs of the forearms of a girl of nineteen: (3) Erythema papulatum, affecting the extensor surfaces of the forearms, the face and calves of a girl of eight years: (4) a still more severe case with the exudation implicating the dermis still more deeply on a man of thirty-two; some of the papules here might also be called nodules: (5) and (6) were cases of E. nodosum, the one an ordinary case in a girl of fourteen with lumbago, and the other in a girl of three, who presented arms and legs studded all round and in their whole length with nodules and a few papules: (7) was a case which I will give with a little detail:

Fanny D—, æt. 23, applied in July with a ringed superficial erythematous eruption on the backs of the hands to a little above the wrists, on the right elbow; one spot in front of either knee and on the back of the heels, one between the shoulders, and two or three under the left eye. Never had them on face and shoulders before. Constipation and coated tongue; no joint affection. The lesions on first appearance are as big as millet seeds and extend to the size of half a crown, becoming ringed, but not vesicating. She had suffered from four attacks in the last three months, each lasting two to three weeks. One was complicated by herpes of lip.

Herpes facialis (or progenitalis) frequently accompanies that outlying group of the erythemata known as herpes iris, of which three cases were met with, one in May and two on the one day in August.

(8) Female, æt. 22. Extensor aspect of forearms from elbow to wrist, a few lesions on back of right wrist, and on face and neck; some unmistakable in character but most imperfectly developed; no herpes facialis; pallid and ill; had it last summer for about a week.

(9) Male, æt. 12. Eruption reaches to just above elbows, mostly on extensor aspect of arms; some on fingers and right palm. Been coming out in crops for a fortnight. Temperature normal. Herpes labialis; foul tongue; first attack.

(10) Female, æt. 33. Had it once a year for last six years, but missed one year. Different times of year. Slight attack involving back of hands only. Generally lasts three weeks. No herpes labialis.

There is usually more or less constitutional disturbance associated with the attacks, such as febrile excitement, constipation, foul tongue, malaise, &c., and rheumatism occasionally. Patients with herpes iris especially often look very ill.

Herpes zoster.—Seven patients came with this eruption, aged respectively four, five, eleven, thirteen (two), seventeen, and forty-six—four females and three males. In all but one patient the eruption was on the left side. Only one complained of pain antecedent to the evolution of the eruption, but all had pricking and shooting whilst the skin lesions lasted. The nerves implicated were the second intercostal with intercostal-humeral branch, the supra-clavicular branches of third and fourth cervical, the third dorsal, the last dorsal, and first lumbar. In a man aged 54 the scars so frequently following herpes ophthalmicus were very distinct two years after the attack.

Leucoderma.—Two males came under notice with this affection. The irregular distribution of pigment, the removal from one place and deposition in the adjoining area, the tendency to symmetry, the rapid extension at certain times, were well observed in these cases.

Thomas F—, æt. 12, with dark hair and of spare habit, is the subject of universal typical leucoderma with general darkening of the skin enclosing the ordinary oval or rounded blanched areas of various sizes. The increase of pigment is very slight or even doubtful in some places. The changes extend over the forehead and sides of the face, all round the neck, over the chest, abdomen, back, and limbs, and are very marked on the abdomen and penis. The hands are free, but the hair is involved. There is a strong tendency to symmetry. Duration of the affection two years. He works in the fields all day and seems strong and healthy, but his sister says "he is all nerves," *e.g.* he is so nervous at school that, though a fair scholar, he cannot write if bothered.

A great point of interest in the case is the occurrence of alopecia areata in three other members of the family. I

have met with one similar case, and Dr. McCall Anderson has recorded another.

P. S—, male, æt. 34, sallow and spare, with black hair, much debilitated and very dyspeptic, with palpitations, and on slight running, breathlessness. Began on shoulders ten or eleven years ago, and slowly spread to arms and hands. Lately the pigmentary disturbance has gone on rapidly over body and legs.

Treatment by arsenic, ferruginous tonics, and cod-liver oil had no curative effect on either case.

Lichen planus.—Six cases of this affection were observed, but none with very severe symptoms. I suggested some years ago that the circumstances attending the onset of certain cases, such as worry, anxiety, mental shock, prolonged nervous strain, the distribution of the eruption in many apparently in relation with the cutaneous nerves, and the constitutional symptoms present in others, such as profound prostration, a choreic condition, sleeplessness, &c., pointed to the neurotic origin of, or deep implication of the nervous system in, this disease. Further experience has only tended to confirm this impression. In not one was the mucous membrane of the mouth affected. All were treated with increasing doses of arsenic, and got well. I endeavour, however, at the same time to relieve the irritation, to procure rest, to help the digestion, and generally to build up the system with tonics and sometimes cod-liver oil. Of one case I cannot find notes.

M. W.	♀ 28	1st attack	Disseminated irregularly down inside of thighs and legs, thickly over small of back, less so over upper part of shoulders	Duration 6 mos.; since she began to suckle a baby; anæmic and very dyspeptic.
L. S.	♀ 40	"	Disseminated irregularly down inside of arms and thighs, and on shins	—
A. C.	♀ 47	"	Appeared first on arms. Some typical papules on legs and arms, and on legs a few large papules, reminding one of syphilitic maculo-papules; mostly run into diffuse sheets; legs and arms only	Felt ill and much prostrated lately, and without any strength. Had 13 children rapidly; last 5 years ago.
E. S.	♀ 37	"	Irregularly disseminated down legs and forearms	Leucorrhœa, catamenia every 3 weeks; poor living; "had much trouble;" "feels awfully nervous."

The following case is very typical, and as it occurred in a boy I will give it in detail:

Walter S—, æt. 14, pale, thin, dark brown hair, had the eruption coming out steadily for one year. Appeared first round waist and then on legs. Now whole body and limbs thickly dotted over, but almost in sheets over back and loins. Much down inside of elbows and on wrists, faintly studs palms of hands. All down the legs, especially inside of knees and on shins, *where it is brown, warty, and aggregated into a sheetlike ichthyosis.* Has been on the feet. In each posterior triangle of neck very thick. None on face, or scalp, or ears, or mouth. The eruption varies in size from a pin's point to a pin's head, and up to nearly a split pea, mostly slightly larger in size than a pin's head. Very characteristic and unmistakable. A dull, red colour with a purple dash, of deeper shade on the legs. Angular, flat, and shiny. Not a sign of a central punctum in any. The great majority have no scales except where aggregated into patches. A few single ones, however, especially about the elbows, are somewhat scaly. The papules are arranged in distinctly beaded lines down to the front of the limbs, and on the forearm and buttocks in little crescents. Round the trunk they mostly follow the direction of the intercostal nerves, a few lines being slanting or even perpendicular. The mother is anxious about the boy as she insists he is not at all well and strong, chiefly because "he has turned so nervous and excitable."

The more my experience grows in knowledge of lichen planus the more careful am I in making a diagnosis. Some cases are very difficult; shining, non-scaly, flat, or rounded topped small papules, with more or less irregular outline, occur in some cases of papular eczema and miliaria. Moreover there is a small papular syphilide, if I do not mistake, which is almost indistinguishable. I shall have something to say on another occasion about such an eruption in hereditary syphilis.

Lichen scrofulosus and Keratosis pilaris.—I will discuss these affections together because there exists at present considerable confusion with regard to the nature of some of these miliary eruptions of the hair-follicles. The following is a genuine case of Hebra's lichen scrofulosus:

John H—, æt. 9, earthy pallor, rickety head; eruption of five years' duration. Symmetrical patches in hams, on thighs, in groins, on buttocks, on neck; disseminated miliary papules over abdomen. Patches composed of miliary papules, characteristic of L. scrofulosus, formed about the follicles. The mother had a diseased spine as a girl, and there was scrofula in the mother's family, according to an aunt.

The next case is one which is quite common in children. I have met with scores at the Victoria Hospital for Children. It is frequently seen occupying the extensor aspects of the arms of children in a poor state of nutrition, but is less common with a more extensive distribution over the trunk and limbs. In the latter case I have learnt to search very carefully for tuberculosis. It is the eruption described in the 'Annales de Derm. et de Syph.' by Lemoine as *Ichthyosis anserine scrofuleux*, which he says affects the extensor aspects of the upper arms especially, but may be nearly universal and associated with pityriasis tabescentium. It must not be confounded with the somewhat similar affection of the follicles which occurs in true ichthyosis, and therefore had better be called *Keratosis pilaris*, or, with Duhring, *Lichen pilaris*. How far Willan's lichen pilaris belongs to the same category I am not quite sure, but we know very well the disease he was describing.

Alfred N—, æt. 14, indolent, dull-red, disseminated, miliary, follicular eruption over the arms and legs, and slightly on the trunk; no aggregated patches. Two months' duration.

The third case is rather different again:

Mary W—, æt. 7, has the extensor aspect of the arms and thighs dotted with a red, indolent, follicular, miliary eruption. Many of the lesions have gone on to pustulation, just as we see in true lichen scrofulosus. The trunk is clear. The forehead and anterior third of the scalp are thickly sown with comedones, amongst which a few acne pustules are seen. This eruption extends down the sides of the cheeks. It came out suddenly about a year ago.

The eruption on the limbs is no doubt similar to that in Alfred N—, but I would particularly call attention to the comedones on the forehead and scalp. I believe I was the first to call attention to this condition in children, which has since been discussed in the 'Lancet.' It is not uncommon and sometimes several members of a family are affected. I regard the condition as belonging to the same category as the eruption on the arms.

There is yet another phase of the eruption which was not illustrated in 1884 at the Skin Department, but which I will briefly refer to. I think it is the *Acné sebacée cornée* of Hardy ('Leçons sur les Mal. de la Peau,' 2me partie, 1863, p.

108). In this the miliary follicular eruption occurs in symmetrical patches on the neck, limbs, or trunk, or every follicle may be involved over the poll or extensor surface of the limbs or the abdomen, and the peculiarity is that from each follicle a little rope or spine projects; hence the application of the term "bristly boy" to an extensive case. I incline to regard these spines as mere accidents, so to speak, occurring in Hebra's L. Scrofulosus or the keratosis pilaris above mentioned. They are only the contents of the follicle extruded. A very similar appearance is sometimes seen in lupus erythematosus in which the follicles are specially involved, and Hardy has referred to this condition as *Scrofulide cornée.*

Lupus.—Two cases of L. vulgaris and two of L. erythematosus came to the department. I will take occasion to add three other cases which I saw at the end of the year 1883.

S. R. ♀	36	L. vulgaris	Began at 3 years old	Occupies all the right cheek, now ceased to spread	Always fair health; no history of phthisis or struma, but father died young.
L. J. ♀	26	"	In childhood	Has ravaged the whole of the skin from the face and neck down to the lower part of the trunk and to the wrists; cartilages of nose gone and of ears nearly so	This patient was in shocking condition, but under the prolonged influence of cod-liver oil and iron she has steadily improved, and the disease is inactive, and has in great measure disappeared. She is strumous and had corneal ulcers and suppurating glands. Her sister has phthisis.
F. D. ♀	27	"	At 14, if not earlier	Covers the face, neck and upper part of chest, a patch on forearm, nose cartilages affected	Scrofulous and phthisical family; scars of suppurating glands in neck.
J.H.G. ♂	32	"	At 4 years	Patches all over face, cartilages of nose going	Blepharitis; opacities on corneæ.
E.O'B. ♀	43	L. erythematosus	7 to 8 years' duration,	One patch on scalp	Brother had "scrofula in knee-joint and round neck." Uncles and cousins on father's side died of phthisis. Had sore eyes and chronic nasal discharge when young.
S. B. ♂	34	"	20 years on foot,	Dorsum of right foot simulating chronic	—

J. L.	♂	38	L. erythematosus	6 years on right ear 10 years	eczema; right ear and cheek, left ear coming Patches all over face	Strumous and debilitated. Has attended Brompton Consumption Hospital.

The case of L. J— was the most extensive and deplorable I have ever seen. She was formerly for a short time under the skilful care of Dr. Walter Smith, of Dublin, but after coming to England she suffered many things and came to me with the ulcerated patches of lupus occupying the greater part of the surface covered in brown paper spread with tar. Under the steady use of cod-liver oil and soothing remedies she is a different being.

The treatment of lupus has undergone such a revolution that one can now guarantee the cure of any case. It is only a question of the degree of scarring left. I scrape with the sharp spoon most of my cases and with great success. For example, S. R— was relieved at one scraping of a burden of thirty-three years' standing, and the scar left was inconsiderable when one remembers the ulceration that had supervened from time to time.

Molluscum contagiosum.—The two cases seen would appear to warrant the retention of the qualification *contagiosum.*

A boy, æt. 13 months, with many growths over the head and *scalp*, and a few on the hands. The mother has one on the forehead, and a little sister, æt. 5½, one on each temple.

A boy, æt. 14 months, with several growths about the eyes. The mother has one or two on the face.

Morphœa.—This rare affection was illustrated by two cases.

Maria G—, æt. 58, presented two small and one larger patch of Morphœa alba the size of the palm of the hand on right leg below the knee. The diseased skin is yellowish white, condensed and hard, depressed, rigid, and not to be pinched up. The larger had been coming from four to five months, and it compressed the veins on the inner side of the leg so as to make the latter œdematous and very painful. Two or three patches on the trunk appeared about the same time. Round the neck is a faint staining, and the patient says that after wash-

ing she can see this more distinctly. The others first came like this. She has tingling and pricking about the body, is dyspeptic, not in robust health, and says she had much worry. In June, 1885, she was in much the same condition.

Alice R—, æt. 6, demanded very careful scrutiny and consideration. She has about a dozen patches from a half-crown piece to the palm of the hand in size. They involve the skin to a very slight depth, so that there is only a shining atrophied condition of the surface with some brownish pigmentation. There are also some curious lattice-work markings on the patches. The diseased areas are studded about the body and limbs without symmetry and apparently without relation to any nerves. One, however, is exactly in the mid line of the small of the back. In six months under tonic treatment all the patches disappeared.

The nature of such a case as the second might easily be overlooked.

Pediculosis.—Under this heading I may mention the case of a man who had a few crab lice in the pubic hairs and numbers clinging to the hairs in the axillæ and round the nipples. There were none about the eyes, though I have seen them on the eyelids of a boy at the Victoria Children's Hospital.

Pityriasis rosea of Gibert.—I shall not detail these two cases, the one in a boy of four and the other in a girl of seven, as I have gone into the matter at length in papers in the 'Lancet' and in the forthcoming volume of the 'Clinical Society's Transactions.' I have now seen a number of cases and am persuaded of its existence as a distinct affection. It lasts several months, there are not any constitutional symptoms to be distinctly associated with it, and the lesions range from a split pea to a finger-nail in size, or somewhat larger. They are of the erythematous type.

Prurigo of Hebra.—Two cases were seen.

Ernest S—, æt. 14 months, first noticed the eruption nearly a month ago round the back and on the arms. Fresh crops have continued to appear since. It is disseminated thickly over all the body and limbs except the great flexures, the genitalia, and the palms and soles. It extends up the sides of the face to the forehead and slightly to the scalp. There are no enlarged glands as yet. The papules are mostly dome shaped, but a few flat topped, in size from a pin's head to a quarter of a pea, in colour exactly like the rest of the skin, excepting in the face, where a few have a pinkish tint. Many of the tops are scratched off. There are no pustules. The child is very fretful and pallid, though fairly well

nourished. The itching is great, especially when warm in bed. When the skin is cool there is but little irritation. No urticaria. Constipated and offensive motions, three double teeth through. Four other children in family and quite free. The usual remedies for scabies do not cure it.

Annie C—, æt. 11, has the characteristic papular eruption disseminated sparsely all over the trunk, very slightly on the neck and cheeks, more on the arms, most on the legs, especially the extensor surfaces; the large flexures are free. The papules are of the same colour as the skin or a very faint pink colour, many excoriated. No vesicles or pustules. She is extremely anæmic. Duration six years, coming on after measles.

Since Mr. Morrant Baker's contribution in 1881 this disease is now fully recognised in London. It is not very uncommon, but still infinitely rarer than in Vienna, and as a rule probably less severe. I have never been able to connect it in any way with Bateman's lichen urticatus.

Seborrhœa.—The subjoined case calls for one or two remarks.

L. H. F—, æt. 10, has on his chest several tawny-coloured patches exceedingly like tinea vesicolor, only that the bodies are more prominent and reddish, though not papulated. On the arms also are ringed patches, otherwise looking like plaques of dry eczema. So also on the poll, neck, and face are irregular, dry, rather desquamating, eczematous-looking patches, and on the head seborrhœa.

I have no doubt that this was a case of seborrhœa. I made a systematic microscopical examination of the patches, and I am certain that there was not any fungus. The eruption on the chest is like one variety of that described by Sir Erasmus Wilson and Dr. Liveing as lichen circinatus or circumscriptus. Wilson distinctly says that though the borders of some rings are papulated others may be uniform. This disease is not recognised, I believe, out of England, and all the cases I have seen I have relegated to seborrhœa, which is well described by Duhring.

Tinea versicolor.—The only cases that call for notice are, first, one in which the ringed patches were somewhat inflamed and the ordinary tawny colour masked by the redness, and secondly, a very extensive case in a stoker wearing flannel, in whom the trunk and upper arms and groins were quite covered, and whose wife had contracted it. The fungus is usually readily found.

Tinea trichophytina barbæ, or ringworm of the beard, is certainly not so very rare nowadays in this country. In 1884 I saw several men with it, who had contracted the disease at a building where they all used the same towel. There is little difficulty about the diagnosis for those who know the characteristic ringworm hairs and fungus which grow luxuriantly in this situation. In early cases the inflammatory rings are visible, and in the later stages of some cases the excessive inflammation and production of nodules attracts attention.

Urticaria papulosa et pustulosa (*Lichen urticatus, Bateman*).—This very common disease of infancy was illustrated by thirteen cases, nine males and four females. In twelve it began under one year of age and in the thirteenth at five and a half years. The diagnosis from scabies is the important point, but the implication of the head and face, the prevalence and history of wheals, the absence of cuniculi, the obstinate nature of the malady, and the freedom of other inmates of the house, serve to distinguish it. In three of the cases the inflammatory papules proceeded to form pustules. Those not intimately acquainted with the disease never dream that they have to do with a simple nettlerash when they see nothing but papules and small pustules, a few wheals, and large ecthymatous pustules. I try as far as possible to enforce a suitable diet, but this is the stumbling-block, to get the gastro-intestinal function in good order and then to tone up the system with cod-liver oil and tonics. Bromide of potassium, belladonna, and chloral are excellent remedies to procure rest at night, for incessant scratching keeps up the formation of wheals in those so predisposed.

Keratosis of the palms and soles.—A remarkable instance of this uncommon but well-known affection, which has been portrayed several times in recent years, came under observation.

Mary Y—, æt. 19, has a fine warty corneous growth, covering both palms and affecting also the soles slightly. Duration two years. It is not secondary to any eruption. Some deep fissures cause her much pain. She is in service and traces the cause in her work, as the hands get better if she rests them, and this

experience is that of the others in the family. The mother's hands are similarly affected, and two of her sisters just a little, but they are teachers and do no manual work. Mary's younger sister, who is just beginning to work, finds her hands going the same way. The mother's father had it badly, even at the age of eighty-eight, and one of his brothers had very hard corns on the hands, but the younger brothers went abroad young and no history of their condition is forthcoming. Their mother again had the same thing. This family hails from Winchester, and the mother of the patient reported that it was a tradition in her family that the condition had prevailed amongst them for 200 years.

This affection is known to be hereditary, but seems to be excited in those so predisposed by external stimulation. The term *Ichthyosis*, sometimes applied, should be discontinued. The process seems to be one of papillary hypertrophy with overgrowth and cornification of the thick cuticle. In advanced cases the growths form a very thick continuous cornified mass. Unna's salicylic plaster was used with much success.

Perionychnia.—A young woman was obliged to relinquish her situation owing to the following uncommon affection:

Alice K—, æt. 20, a healthy-looking brunette, engaged as a barmaid near the Exhibition, and incessantly occupied for long hours in drawing beer, with which her fingers are always wet. Has nothing to do with cleaning pewters or brass. The skin around the nail, especially at the root of all the fingers, is red, hot, swollen, and diffusely inflamed. The condition has been going on for several months. Directly she rests from her work they get better. The inflammation has interfered with the growth of the nails, and the proximal third of each is atrophied, thinned, deeply grooved, and discoloured, exactly as in many cases of eczema implicating the fold.

I will take the opportunity to add a note of another case of a different character seen at the end of 1883.

Walter B—, æt. 12, applied with suppurative inflammation, apparently of spontaneous origin, of all the finger-nail roots and the adjoining skin fold. The growth of the nails was much interfered with and several were shed. The toe-nails were unaffected. There was a history of ulcers on the legs and face before he was seven years old and he rapidly recovered under cod-liver oil and iron.

Purpura.—Five women with this disease were treated. In each one an examination failed to disclose any disease of the heart, liver, spleen, or kidneys.

Alice E—, æt. 30, has had purpura of legs entending upwards to the trunk for one week. Is very anæmic from prolonged suckling.

Sarah S. R—, æt. 40, has petechiæ on wrists and legs, especially the calves; both legs œdematous; marked anæmia. She has had perfectly white hair since twenty-one years of age. It is not hereditary.

Martha L—, æt. 18, has purpura of the legs and slightly of the external aspect of the arms; left leg œdematous. She says the knees swell, but no clear relation between this symptom and the hæmorrhage can be made out. Attended last year with ulcers of the shins preceded by purpura. Has been growing very fast; anæmic and unhealthy looking.

Annie W—, æt. 36, under treatment with Pot. iodid. for tuberculated syphilis; cured. Three weeks later returned with œdema of legs and purpura of lower third of legs. This was probably not due to the iodide.

Sarah K—, æt. 67, has had extensive purpura of legs and hips and arms for three months, and has been for five weeks in a country hospital. Is much debilitated.

Verruca.—Only two patients applied specially for this diseased condition, although, of course, warts were observed on many others. A boy, æt. 8, had digitate warts of the scalp which is not an uncommon complication in adults of a chronic irritable condition, such as seborrhœa; and another boy, æt. 8 also, came with a great many warts disseminated over both surfaces of the hands and fingers, and one on the nose, and one on the mucous membrane of the lower lip.

I may mention here that many practitioners, who are otherwise fairly acquainted with diseases of the skin, fail to recognise the fact, and are thereby much puzzled, that in many chronic inflammations, especially about the leg and scalp, the papillæ undergo hypertrophy and quite mask the character of the original eruption. This is seen, for instance, in chronic eczema and psoriasis, syphilis, lupus vulgaris and erythematosus, and lichen planus. Several illustrations of this fact were pointed out during the year.

Syphilis.—I have preserved a record of sixty-eight cases of syphilis, which may be conveniently arranged thus:

Hereditary	5
Acquired	63
Macular or Roseolar Syphilide, 6.	
Small papular or Miliary, 2.	
Acneiform, 8.	
Large papular, 22.	
Mixed papular, 1.	

Large papular and Ecthymatous, 1.
Papulo-tubercular, 8.
Tubercular, 16.
Lupiform, 3.
Gummata, 1 (and 1 complicating a second case).

The absence of primary lesions and the proportion of forty-six females to seventeen males may be accounted for chiefly by the fact that patients with avowed venereal disease come under the surgeons.

The *macular or roseolar syphilide*.—This earliest of secondary syphilides was met with only in females. It was seen as a comparatively local eruption on the abdomen, and as a general one involving also the limbs. In two cases the gradual intermixture of papules was observed, and the generalisation of the eruption to include the palms and buccal cavity. Ringed eruptions at this stage are not so common as in later eruptions, but in one case with general adenitis and ulcerated throat after delivery of a stillborn baby, macules the size of a shilling on the forearms were markedly ringed, and there were also corymbose groups of miliary papules coming on the thighs.

The *miliary papular and acneiform syphilides* group themselves together, as the latter is the pustular termination of the former, and they are of early occurrence.

The following case was purely papular and is of interest from its close resemblance to lichen scrofulosus, and secondly, from the fact of the precocious development of nodes:

Wm. H—, æt. 17, chancre, end of November, 1883, applied January 30th, 1884, with the stains of syphiloderma erythematosum all over the trunk, sore-throat (one month), general adenitis, anæmia and wasting, and a miliary eruption of the trunk and limbs indistinguishable from that of lichen scrofulosus, also with four or five painful nodes of the scalp in size from a big nut to a split walnut.

The remaining cases fall into two groups, the early general papulo-pustular eruptions, and the later localised recurrent acneiform eruptions of the forehead and scalp.

Amelia W—, æt. 21, general miliary papular and acneiform eruption in groups, some faint stains of macules on abdomen.

Susan S—, æt. 34, ulcerated tonsils and a general acneiform eruption arranged in groups of three and four over the trunk, limbs, palms, soles, and scalp.

Eliza A—, æt. 36, anæmic and debilitated, lower part of back of neck and shoulders covered with miliary papules, and a few acneiform pustules; no pigmentation and no pitting; also on limbs, mostly on their extensor aspects. Much macular eruption on abdomen six weeks ago.

Thos. G—, æt. 28, chancre, three months ago, now sorethroat, fading macules of trunk and upper arms, and a general papulo-pustular eruption closely simulating varioloid; on the face a few maculo-papules.

James T—, æt. 19, a strumous youth with general adenitis and very much enlarged neck glands; chancre beginning of April, 1884, applied in August with a typical acneiform syphilide of four months' duration. It is on the nose and chin, the neck, especially the poll, slightly in the scalp, in corymbose groups over the shoulders and upper part of back, and very thickly arranged over the extensor aspect of the limbs. The eruption leaves pits and stains, especially over the legs. Cod-liver oil was freely administered.

Lastly, four cases were seen illustrating the localised later form which occurs over the anterior part of the scalp and the forehead or the latter alone. It tends to recur and yields best to a mixed antisyphilitic treatment. If there is much pitting left the diagnosis from what is believed to be a distinct non-syphilitic affection, viz. acne varioliformis, is very great, unless other evidences of syphilis are present, such as some tuberculated eruption as in one of my cases.

Other papular syphilides.—The papules in syphilitic eruption may be of course of all sizes from the miliary to the large psoriasiform papule, and this variation of size is often exemplified in a single case. One very striking instance came under notice. Likewise as the miliary papules, when they pustulate, become converted into the acneiform syphilides, so the larger papules in their turn pass into the ecthymatous syphilides. This was also illustrated. Only one case presented any marked difficulty in the diagnosis from psoriasis by reason of the unusual amount of scaling present. I will refer also to evidence that the formation of rings is much more frequent from papules than macules, because of their great chronicity and tendency to peripheral enlargement. The rings formed have generally a broad thick margin, but there is a rarer variety with very delicate margins of which a good example was seen. Each eruption

was about the size of a shilling, and of a very superficial character, so that hardly any discolouration was left within the fine raised border. The following case is an unusual one:

Ann G—, æt. 36, superficial ulceration of tongue and buccal mucous membrane, a ringed maculo-papular eruption on the chin and around the mouth, which she says has come every spring and fall of the year for ten years. It began before marriage. She has had syphilitic children.

Included in the twenty-two cases of large papular syphilide are eight of the later palmar syphilide, four of the right side, four of the left, always unilateral and not bilateral as in the general eruptions, recurrent often over many years, and in one of the cases eighteen years after the primary sore. This syphilide in the comparatively early years is frequently associated with other localised syphilides, and even in later years with inflammation and scarring of the tongue. In seven of my cases there was a distinct ring of papules round the periphery of the palm, originating in a central papule. In the eighth the centre of the palm was diffusely red and exfoliating. In one the sole and one finger were involved. The influence of alcoholic indulgence in keeping up this eruption is very marked.

The *tuberculated syphilide* occurred sixteen times, and was generally localised and recurrent, frequently serpiginous and ringed, or the nodules arranged in crescentic groups. Pustulation, and especially ulceration, is also very common. A node of the tibia complicated one case.

The *lupiform syphilide,* which was formerly misnamed *syphilitic lupus,* sometimes simulates lupus very closely as everyone knows, and as a case I will cite will show. With care there can rarely be great difficulty. Still in the majority of cases it is notorious that eminent specialists are sometimes at fault.

Fanny A—, æt. 36, infiltration of the upper lid and tip of the nose, indistinguishable in aspect from lupus vulgaris, began three months ago on upper lip; earthy pallor; five miscarriages; rapid cure by iodide of potassium.

Susan H—, æt. 37, alæ nasi and tip of nose infiltrated, ulcerated, and covered with dirty crusts; duration four months; earthy pallor; miscarriage; ocular paralysis ten years ago; rapid cure by iodide of potassium.

Alice B—, æt. 38, almost the whole face involved with a diffuse livid coppery, lupiform infiltration, interspersed with deep scars, commenced on the upper lip three years ago. Says she has been scraped for lupus in one of the largest London hospitals, and hence the scars. Large gumma above the left clavicle, and a second involving the half of the right elbow-joint and the ulnar nerve. Miscarriages. Syphilitic child. Complete disappearance of the infiltration in three weeks under iodide of potassium.

The diagnosis of syphilis was made before the gummata were observed, but so close was the resemblance to lupus that several medical men experienced in skin diseases, who saw the case, upheld the diagnosis of lupus. The woman, who drank heavily, was under observation, though not treatment, for some time, steadily went to the bad, and when last seen had commencing ascites, breaking down of the gumma at the elbow, and returning infiltration of the face.

SHORT NOTES AND CASES.

UofM

NOTE ON THE TREATMENT

OF

INTERNAL HÆMORRHOIDS BY THE PRESSURE-FORCEPS AND ACTUAL CAUTERY.

By A. BOYCE BARROW.

When internal hæmorrhoids have developed into tumours, protruding with every action of the bowels, often, too, coming down and causing great discomfort when the patient is walking, they will not yield to any treatment short of removal.

The chief danger attending this operation is hæmorrhage, and the most reliable measures possible should be employed to diminish this risk. I have adopted during the last two years a method which appears to be both theoretically and practically trustworthy as preventive of bleeding, at the same time that it possesses many other advantages to recommend it.

The operation is performed as follows:—The bowels having been well emptied by an aperient and an injection, the piles are brought well down, and one is seized with a pair of ring forceps. While it is pulled well down a strong clamp is applied to its base, and, forcible pressure being applied by this means, the pile is cut off with a knife. I use the crushing clamp introduced by Mr. Benham. The actual cautery is then slowly applied to the cut surface, and now the compression clamp may be removed and a second pile dealt with in the same way, and so on until all are removed.

In applying the clamp, or, as I should prefer to call the instrument, the *pressure-forceps*, there are one or two details deserving attention:—First, the pile should be drawn well down before the pressure-forceps is applied, so as to include as little of the submucous tissue as possible within its grasp; secondly, the forceps should be applied in different directions with regard to the axis of the bowel, so that the direction of some of the cicatrices which must afterwards form be parallel to it and others transversely disposed. Attention to these precautions does away with any tendency to constriction of the gut which might otherwise follow an operation upon a severe case.

The employment of antiseptics increases the safety of the operation; accordingly all instruments and sponges should be previously purified in a carbolic solution, and it is a good plan to dust iodoform over and around the anus at the termination of the operation.

The special advantages which I have found in this method are:

1. The rapidity with which the operation may be performed.

2. The complete absence of bleeding at the time of the operation, and the double security against any after-bleeding afforded by the pressure-forceps and the cautery, for either of these has been proved to be trustworthy. Indeed, the old-established plan of the clamp and cautery so largely practised by Henry Smith is very efficacious, and recently Benham's clamp has been very highly spoken of. So reliable have both these methods been found that it may seem superfluous and unnecessary to combine the two, but my experience of operations upon hæmorrhoids has convinced me that a surgeon cannot be too cautious in protecting the patient against hæmorrhage; and, in addition, by applying the actual cautery to the cut surface of the compressed pile we are using the most powerful antiseptic possible.

3. The small amount of pain that attends the operation.—In one case where only a single pile existed I operated without an anæsthetic, and although the patient said it hurt him very much he did not move, and on going to him ten minutes after I found him sitting up in bed and free from pain.

Further evidence of the small amount of pain arises from the fact that I have not on any occasion introduced a suppository into the bowel, and although I have ordered an opiate draught to be taken if required, in no case has it been found necessary to give it. I am inclined to think the absence of need for opium an advantage in itself, for without considering the disagreeable symptoms which may arise from headache and stomach derangement, its constipating effect upon the bowels renders it necessary to give a more violent aperient when the time arrives for the bowels to be relieved, and thus more pain is occasioned.

4. The rapidity of recovery.—In one case a patient left the hospital four days after the operation, and his recovery was uninterrupted. I do not recommend such a course as wise, but I may say that most patients are able to get about comfortably at the end of a week.

A CASE

OF

GENERAL PARALYSIS OF THE INSANE.

By Dr. SUTHERLAND.

Mr. A. B—, æt. 42, single, surgeon, admitted 5th January, 1884. Uncle insane; father and mother very nervous. Said to have had an attack of insanity twenty years ago. A strong, thick-set man, in the prime of life, with a very sensual expression of countenance; bushy eyebrows, bristling hair, stubbly beard, thick lips, eyes half closed, and a hectic flush over the cheeks. Had evidently been struggling violently with his attendants before admission, as the knees were bruised and there were several abrasions, some recent, some nearly healed, on various parts of his body.

The right pupil is much contracted; there is marked fibrillar trembling of the tongue, the speech is also affected, and the gait is that of a general paralytic in the early stage, dignified and strutting, with the heels brought sharply down on the floor at each step.

He has numerous delusions of grandeur, which change from day to day. He affirms that he is the cleverest man in the world, and that he can cure all diseases with carbonate of lithia; that he will shoot Mr. Gladstone and become Prime Minister; that he is going to visit the Queen and ask her to annex every country in the world to England; that he is going to give the Alexandra Palace to the people as a place for public recreation; that he is going to drive a four-in-

hand to the Crystal Palace; that his existence is quite different from that of other men, that he is an ideal man and that all other people are nobodies. Language very obscene and blasphemous. Writes cheques for the attendants for millions of money. Before admission had actually given a diamond ring worth £80 to a barmaid he had only seen once in his life. He gradually became very noisy, violent, and dirty, kicking and biting the attendants, and was placed in the padded room.

February 24th.—Had a severe epileptiform convulsion, after which much flattening of the upper lip, falling in of the muscles of the face and ptosis of both eyelids were noticed, which symptoms lasted for a day only, but reappeared after subsequent similar attacks. Curious alternations of dementia and mania then ensued, accompanied with an ever-increasing number of convulsions.

On April 1st he was quiet and sleeping well.

On the 20th neuralgia of the spine set in, which was relieved by local applications. He now became much weaker, and was unable to stand without assistance. Obstinate vomiting also commenced, which was with difficulty suppressed.

July 29th.—The dementia had much increased, he became very somnolent during the whole day, and could only be roused to answer questions with much difficulty.

On the 12th of August he became extremely violent, and vigorously attacked the attendants who bathed him.

19th.—Became very lost and demented, wet and dirty.

22nd.—Refused his food, but was fed with a spoon by the attendants. Said he had created his food and therefore he must not eat it. He began now to lose flesh very rapidly.

31st.—Was put to bed, being too feeble to sit up. The bowels were confined, and could only be moved by means of stimulating aperient injections.

September 7th.—Great difficulty of breathing and swallowing set in. Coma and stertor supervened, and he gradually sank and died at 7 p.m.

No examination was permitted.

Remarks.—This was a typical case of general paralysis, for the following reasons. It occurred in the male, was pro-

duced by mental strain, and alcoholic and sexual excesses. It occurred at the age of forty-two, the exact age (between twenty-five and sixty) at which this disease is most common. The temperament of the subject was sanguine. There was hereditary taint, which Calmeil believes to exist in one third of the cases. There was the history of another attack of insanity. The delusion concerning the lithia was one which was associated with the profession of the patient. A month before he died he recovered from a condition of profound dementia and attacked the attendants. A fortnight before he died a new delusion was developed. These two facts point to the great recuperative power which exists in this disease both physically and mentally. It is to be remarked that the patient was unmarried. The usual proportion of unmarried to married general paralytics is about one to two.

This patient showed symptoms of his disease sufficiently marked to attract the attention of his friends about six months before admission to the asylum. He had money delusions, and purchased expensive and wholly unnecessary articles. The duration of the case, therefore, from its earliest noted symptoms till death, was thirteen months, a shorter course than is usual in this affection.

CASE

OF

GENERAL TUBERCULOSIS IN AN INFANT,

TUBERCULAR MENINGITIS AND ABUNDANT TUBERCLE IN THE BRAIN GIVING RISE TO NO CEREBRAL SYMPTOMS.

By Dr. SYERS.

H. G—, æt. 1½, admitted under Dr. Sturges, May 9th, 1885. The child was reported to have been in good health until six months before admission, when it was noticed that it had a cough, and that the abdomen was becoming larger. There was also progressive emaciation, and the child was said to have been constantly drowsy. Three weeks before admission a discharge from the left ear was observed. The bowels remained regular throughout.

On admission the child was thin and pale, the abdomen was prominent, the spleen enlarged, the ribs beaded, and the extremities of the radius and ulna enlarged. There was general bronchitis, over the right side of the chest was impaired resonance, and the breath-sounds here were much feebler than on the left side. The temperature on admission was 101·4°.

From May 28th there was a steady decrease in weight, the child becoming greatly emaciated during the three weeks preceding death. The physical signs remained as on admission, the impaired resonance being especially marked at the upper portion of the right lateral region of the chest. In this locality an exploring needle was several times intro-

duced, but without result. There was no convulsion at any period of the child's residence in the hospital, and no paralysis of any kind was observed. Throughout there was marked hyperæsthesia of the general surface, the child crying out and resisting when gently touched or in any way moved. It was treated with hypophosphite of soda in ten-grain doses thrice daily. Death ensued on July 2nd.

Examination (fifteen hours after death) by Dr. Hebb.—The body was emaciated. There was a considerable quantity of thick yellow lymph distributed chiefly over the base of the brain, but present also in considerable quantity over the sides and vertex. There was a large excess of subarachnoid and ventricular fluid. The pia mater was studded all over with tubercles, which were, however, most abundant at the base, the various fissures being almost occluded. It was impossible to strip the pia mater from the brain in any part. The walls of the ventricles were greatly eroded. There were two patches of caseation on the lower surface of the right lobe of the cerebellum, and at the junction of the cord and medulla oblongata was a caseous mass, about the size of a pea, situated chiefly on the right half, but passing towards the left half of the cord and medulla. The inter-meningeal space of the cord was distended with fluid. The right pleura was thickened throughout; the thickening was partly interstitial and partly due to a coat of semi-organised yellowish lymph; its opposing surfaces were firmly united throughout. The left pleura was perfectly smooth and shining all over. Both lungs were closely studded throughout, almost uniformly, with greyish-yellow tubercles. In the centre of the right lung was a spheroidal mass of caseation about the size of a Barcelona nut. The mediastinal glands were much enlarged and caseous. The bronchial mucous membrane was inflamed. The heart was normal. The liver contained a few large yellow and many small white tubercles. The spleen was full of tubercles. There were a few tubercles in the kidneys. The mesenteric glands were enlarged and caseous.

Remarks by Dr. Sturges.—The foregoing case, an ordinary one of general tuberculosis in an infant, offers this one feature of clinical interest, that, notwithstanding the existence of meningitis and of abundant tubercles in the brain, there

were from first to last, no cerebral symptoms, unless general hyperæsthesia be so regarded. From the nature of the case and with the ample opportunity of observation afforded by the gradual decline of the patient, we were long on the watch for some such signs. None appeared, however, and the child died without either vomiting, tremor, or spasm. Unfortunately no ophthalmic examination was made, and it was not possible to examine the eyes post-mortem.

It is well known that the symptoms of meningitis may be simulated so that from time to time a diagnosis of that sort is disappointed. But less familiar is the fact, of which the present case gives proof, that in general tuberculosis tubercular meningitis may be present in a marked degree without giving evidence of its existence by any of the ordinary signs.

CASE

OF

SUPPOSED INTESTINAL OBSTRUCTION.

SYMPTOMS OF ACUTE INTESTINAL OBSTRUCTION—OPERATION—DEATH—NATURE OF OBSTRUCTION UNDISCOVERED.

By Dr. SYERS.

H. T—, æt. 6, schoolboy, admitted March 13th, 1885. The patient's paternal grandfather and paternal uncle died of phthisis. The maternal grandfather became hemiplegic and aphasic.

The child appeared to have been in good health until the present illness. He had had measles, and had been occasionally liable to cough, but was never laid up with any definite chest complaint. The history of the illness for which the child was admitted, dated from March 8th, 1885. Having been previously in good health, about two and a half hours after a dinner of boiled pork on that day, he commenced to vomit. The sickness was said to have continued off and on until the morning of the 11th, when it ceased, and did not recur until the 12th at 2.30 p.m. The vomited matter was said by the mother to have been frothy and yellowish in colour. He vomited once at 2.30 p.m. on March 11th. On the 12th he is said to have brought up a liquid of a brown colour and offensive odour, and which the mother described as "just like a motion." The bowels were not opened since

the 6th March. On the 10th he first complained of pain in the abdomen, the pain apparently having been referred to the epigastric region. There is said to have been much abdominal tenderness on pressure, but the abdomen was not noticed to have been abnormally distended. On the night of the 11th he is said to have screamed with pain in the abdomen. The pain apparently ceased on the morning of the 13th. Before admission five enemata had been used, but without result. Urine was passed normally.

On admission the child was well nourished. The abdomen was distended, but not very tense; no tumour was felt, and examination per rectum revealed nothing abnormal. There was no dulness anywhere over the lungs; rhonchus and sibilus accompanied the breath-sounds at the bases, otherwise the sounds within the chest were normal. The patient was very drowsy and somewhat short of breath; the pulse very small. He complained of pain in the epigastric region, and obstinately refused to take food. He was fed with milk administered by the nose-tube. The temperature on admission was 100°. A simple enema brought nothing away. At midnight on the 13th the abdomen was somewhat less distended than on admission. The child lay with its head retracted and occasionally gave a prolonged scream. A second enema was administered, but brought nothing away. Insufflation also was practised. On the 14th the patient was sick at 2.30 and at 4 a.m.; the vomited matter was of a dark brown colour, not stercoraceous. At 5.15 a.m. four ounces of milk were taken, and the child was sick immediately afterwards. At 12 midday he was in a drowsy condition and resented being touched. There was occasional prolonged screaming; the face was flushed. The abdomen was distended, not painful apparently, or tender on pressure. The large intestine was obviously distended; no struggling bowel was apparent. There had been no action of bowels since admission, nor, according to the mother's report, since March 6th, that is for eight days. Respiration 60; pulse 128. The temperature varied from 100·4° to 102·4.° A gentle stream of warm water was now allowed to flow into the large bowel for half an hour. A gallon and a half of tepid water was injected in this way; after passing for about

ten minutes the returning water was found to be discoloured and a few hard fæcal morsels passed. The tongue was moist and somewhat furred. The patient by this time was in a very prostrate condition; no food was retained; and the matter vomited, although not distinctly stercoraceous, was of grumous consistence and suspicious odour. At a consultation on the morning of this day with Mr. Richard Davy, it was determined to defer operation until the effect of some further irrigation of the bowel had been tried. No relief following, however, it was finally decided that surgical interference offered the sole remaining chance of life. Abdominal section was performed at 2 p.m. on this day. There was no peritonitis and no struggling or distended bowel could be found. No intussusception was noticed, but during the course of the operation about four ounces of dark brown fluid of fæcal odour suddenly escaped per anum. This appeared to be due to the unfolding of some twisted bowel, but the exact nature of the obstruction remained obscure. The temperature shortly after the operation fell to 95·8°. During the night following the operation the patient had eight ounces of milk in equal portions. He vomited three times in the afternoon after the operation, retaining but little of the nourishment then administered. The milk taken during the night was retained. The next morning (March 15th) the pulse was 160 and the respiration 68. The child manifested the greatest dislike to being touched, and constantly uttered a cry of the same character as that of yesterday. The child was sick once that morning. Nothing had passed by the bowels since the operation. The temperature varied from 101·6° to 100·6°.

At 3 p.m. on the 15th the vomiting continued to recur occasionally, and there had been no action of the bowels. The patient was extremely restless, and continued to utter a similar cry to that of the morning. During the night the vomiting became more urgent, and death occurred without the development of any further symptom.

At 2.30 a.m. on the 16th, the temperature taken two hours before death was 102°.

Examination (twelve hours after death) by Dr. Hebb.—The body was fairly well nourished. The brain weighed

fifty-four ounces, the dura mater was firmly adherent to the calvarium, the pia mater and nervous matter were normal. Examination of the abdomen showed acute general peritonitis; the intestines were pale, sticky, and opaque, their mucous surface being dotted all over with minute elevations which were probably due to enlarged follicles similar to the granular catarrh of the mucous membrane of the fauces. There was some sacculation at certain points of the descending colon; with these exceptions the intestine appeared to be quite normal. There was considerable injection of the mucous membrane of the stomach near the pylorus. The heart was normal. Both pleural sacs contained a slight amount of turbid fluid, and over the pulmonary pleura of both lungs was a thick layer of yellow lymph, which was easily detached. The bronchial mucous membrane was inflamed. The upper two thirds of the lower lobe of the left lung was pneumonic, showing the stage of red hepatisation passing into that of grey hepatisation; in the centre of the consolidation an irregular cavity was found having definite walls. The contents were granular, thick, and blood-stained. In the right lung was a band of consolidation which occupied the lower third of the upper lobe; this consolidation was in the early stage of red hepatisation. The liver was spotted throughout with minute yellow patches. The spleen and the kidneys were normal; the mesenteric glands were much enlarged.

Remarks by Dr. Sturges.—The facts just narrated speak for themselves. Here was a case exhibiting most of the symptoms attributed to abdominal obstruction, vomiting, colic, abdominal distension, early collapse; while at the same time the sudden onset, violent pain, and absolute constipation were so many of the characteristic signs of the same condition. Yet there was no post-mortem evidence of occlusion past or present, the appearance of the intestines when exposed to view during life was quite natural, and the peritonitis found after death was no doubt the consequence of the operation. The only evacuation of the bowel was that which has been mentioned as occurring while this was in progress. But, the operation over, there was no further action on the

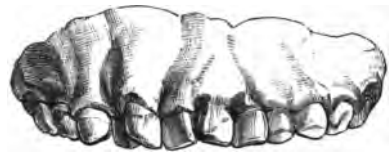
part of the bowels, nor any relief from vomiting. The case is in fact one of erroneous diagnosis, yet whatever may be the real explanation of the symptoms in this particular instance, a point open to much difference of opinion, it is worthy of record and remembrance as showing that the signs on which we are accustomed to rely as evidence of intussusception and strangulation are, at the best, fallible and precarious.

CASES OF INTEREST IN THE DENTAL DEPARTMENT.

By MORTON SMALE.

Case 1.—W. T—, æt. 8, applied to have an upper front tooth twisted. On examination he was found to have the right upper front incisor well erupted, but the mesial edge instead of the labial surface presenting towards the lip. The left upper front incisor was erupting very slowly, and had hardly appeared through the gum. The tooth was grasped firmly by a pair of straight-bladed forceps and twisted into a good position, care being taken to press the tooth firmly into the socket during the operation. It was tied to the surrounding teeth with silk twist in order that it should not return to its old position. A week afterwards the tooth was quite firm in the new position, and there had been little or no inconvenience. The boy said "it ached all that day," but from that time there was no pain or discomfort. The tooth could be tapped, and he could distinguish between hot and cold applications. There was no discolouration, and the gum was quite healthy.

Torsion may be used freely before the patient is twelve, and should always be done at one operation. It is only applicable to the incisors.



CASE 2.—The above woodcut represents the mouth of a child who presented himself at the hospital, and is interesting from a comparative odontological point. It will be seen that the patient has the full typical mammalian dentition with regard to the incisors, the formula for which is $\frac{I}{3}\,\frac{C}{1}\,\frac{PM}{4}\,\frac{M}{2}$, the ordinary dentition (deciduous) in man being $\frac{I}{2}\,\frac{C}{1}\,\frac{PM}{0}\,\frac{M}{2}$. Which of the incisors is usually suppressed; is it I_2 or I_3? Authorities differ, the majority agreeing that it is I_3. This case appears to support Professor Turner's opinion that it is I_2 for this reason: I_2 is as large or larger than I, while I_3 is about the usual size and shape of an ordinary lateral incisor. To support his view he refers to a large number of cleft palate cases accompanied by fissure through the alveolar border, and has found that usually a tooth is suppressed in these cases and that generally it is I_2, I_3 persisting and being found approximating to the canine. He further considers that the alveolar suture is in the substance of one of the premaxillæ, and not at the suture between the maxilla and premaxilla situated just at the position that I_2 would occupy. In this view he is supported by Dr. Albrecht. It appears very conclusive that in man it is I_2 that is suppressed, and that in this mouth it is I_2 that is the extra tooth, not I_3.

CASES 3 and 4. *Imperfect articulation.*—Two cases during the year have been sent to the Dental Department in order that obturators might be made for cleft palate, and in each case on examination there was found to be no cleft. The arch in the first case was abnormally high, but in the second it was quite ordinary. Nevertheless, in both cases the articulation was of that peculiar nasal character that always accompanies fissure of hard or soft palate.

In the first case it was considered that the manner of speech might be due to the abnormal height of palate, and an artificial one was made with no good result. Some trouble was then taken to make the patient pronounce each syllable of a word separately and distinctly, and then slowly to repeat the whole word together. This was accomplished with several polysyllabic words, forcing the conclusion that the cause of the defect was that as a child he had been allowed to pronounce words in what parents fondly call "a childish way" instead of being made to enunciate properly, and that the habit had grown with the child until, when he presented himself at the hospital, he was seventeen. Satisfactory proof having been given that he could pronounce properly he was told to go home and break himself of the habit, and his mother was instructed to give him no food until he asked for it with perfect articulation. The boy was anxious to be cured, but found sixteen years' bad habit an exceedingly difficult thing to overcome. By dint, however, of hard practice and perseverance he almost entirely conquered the habit during the next six months, though directly he talked quickly or without circumspection he invariably reverted to the old manner of speech.

The second case was more difficult, as the patient had reached the age of twenty-five, and no amount of showing would convince him that he could do better if he pleased. He wanted something done in the "miracle way" that would cure him at once, and he would not take the trouble to cure himself. He would have been a good case for "faith healing."

Case 5. *Alveolar abscess.*—E. G— came to the hospital with an enormously swollen face. The pus had infiltrated the whole of the areolar tissue of the cheek, closing the eye, and spreading down into the neck. On looking into the mouth the fangs of the second lower molar were found to be the cause. These after some difficulty the patient allowed to be removed, a free flow of pus and permanent relief following. The difficulty the patient made was that his doctor had told him he must not have the tooth removed while the inflammation continued. It is to be hoped that

this old error is exploded. An offending tooth should be removed, notwithstanding the inflammation, at once, and no amount of swelling should prevent this being done. This case is reported solely to call attention to this fact, difficulty so often arising at the hospital from the patient having been told *not* to have the tooth removed while the face is swollen.

Cocaine in dentistry.—This new drug, so useful in ophthalmic surgery, is not altogether useless in dentistry. Crystals of the citrate are perhaps the most useful, but a 50 per cent. solution of the alkaloid is very good.

Its main uses are as follows:

In extraction, if the drug is applied to the gums surrounding the tooth (the part having first been dried and protected from the saliva or the cocaine will be washed away), the pain attending the adjustment of the forceps is obviated, but the wrench attending the fracture of the outer wall of the alveolus and rupture of vessels and nerves at the apical foramen is much the same. A small loose stump may be removed almost painlessly.

In cases of fractured teeth, where it is necessary to remove the pulp, cocaine is also useful. Applied to the surface of the exposed pulp it will deaden the sensibility, and if applied several times at short intervals the nerve extractor can be passed up the tooth, and the pulp extracted at once with very little pain. Cocaine is more effectual than anything else in these cases.

In cases of odontalgia, when the pain is due to exposed pulp caused by caries, it is not better than carbolic acid.

In cases of periodontitis, when the tooth is painful on percussion, and feels too long, it is useless; counter-irritation is much more effectual.

This drug is of distinct value in practice, and should be in every dentist's consulting-room.

CASE

OF

ULCER OF STOMACH WITH RAPIDLY FATAL HÆMATEMESIS.

By Dr. BALL.

John Nottage, æt. 33, labourer, was admitted May 20th, 1885, under the care of Dr. Donkin. He stated that he had had no previous illness. He was in the habit of drinking a great deal of beer and spirits. He was subject to morning retching. He had been in his usual health till eight days before admission, when he began to feel slight discomfort after food, but no sickness. On the evening of May 17th he vomited a large quantity of blood. He went to work as usual on the morning of May 18th, but had to leave off about 11 o'clock, through faintness and pain in the chest. On the morning of May 20th he vomited some more blood.

On admission he was blanched. He had no tenderness in the gastric region and complained of no pain. He was put on milk, beef tea, and bread and butter. He was kept in bed, his general condition improved, and he continued quite free from pain or tenderness. On the afternoon of May 29, he vomited about twelve ounces of blood. After that, he was fed by enema only. On the following morning, as

he returned from the closet, he was seized with severe pain in the stomach, and became very faint and blanched. He recovered in about half an hour. The following morning, May 31st, while using the bed-pan, he felt sick and vomited about a pint of blood. This was followed by severe pain in the epigastrium, and he died in twenty minutes.

At the autopsy the stomach was found much distended, and contained a large quantity of blood. The intestines were also full of slimy black fluid. Half way between the pyloric and œsophageal openings, in the lesser curvature, was a circular ulcer about the size of a florin. The cutaneous and internal parts and viscera were extremely pallid. The liver was seventy-four ounces, soft and of a drab colour. There was nothing else of note.

The duration of this case from the first symptoms of indigestion to the fatal hæmatemesis was nineteen days. During this period he had four attacks of hæmatemesis, and probably two hæmorrhages into the stomach unattended by vomiting. The first attack of hæmatemesis occurred five or six days after the earliest symptom. He never had anything like severe pain except after attacks of hæmorrhage, when his stomach was probably distended with blood. His complete freedom from pain and tenderness on admission, coupled with a strong alcoholic history, led to the suspicion that the hæmorrhage might be due to cirrhosis of the liver rather than to ulcer of the stomach. Nevertheless it is well known that a good proportion of rapidly fatal cases of ulcers of the stomach run their course in a very concealed manner. Many cases of perforation have been recorded, in which only a few days, or even hours, of slight discomfort preceded the fatal termination. It is not easy to explain this. It is highly probable, however, that the pain, tenderness, and vomiting which usually characterise this affection do not depend on the mere existence of a ulcer, but on local peritonitis, and on cicatricial contraction, and adhesions interfering with peristaltic action. Such being the case, if the ulcer runs a rapid course from the first, it is apt to terminate fatally while the symptoms are yet latent. Extensive hæmorrhage, too, is more likely to result from rapidly progressing ulceration than from a more gradual process. Still more will rapid ulceration, at the

commencement, be likely to produce perforation, for the stomach has not time to contract adhesions to surrounding parts which in chronic cases prevent escape of its contents. One remembers how in the same way rapid breaking down of the lungs far more frequently leads to perforation of the pleura and pneumothorax than a more chronic phthisis, in which the layers of the pleura almost always become adherent.

ON A CASE OF PERITYPHLITIS.

By J. SWAIN.

M. W—, æt. 33, was admitted to Adelaide Ward on May 11th, 1885, with a history of having been ill ten days. She complained of shooting pains in the right iliac region with "swelling" in the same situation, anorexia, thirst, and general febrile symptoms. The bowels were regular and there was no sickness. She had had similar attacks in 1883 and 1884 respectively, the former having come on soon after confinement.

On admission the patient's face was pale, with sunken eyes and pinched features; she was very restless, and obtained but little sleep on account of the pain. She lay with both legs drawn up. There was marked tenderness in the right iliac region with a hard swelling in the position of the cæcum and along the course of Poupart's ligament. Extensive old cicatrices were seen in the same region. No redness on surface. Indistinct fluctuation on deep pressure. Tongue markedly red, but moist. Pulse 116; temp. 103° F. Urine 1018, acid, no albumen. Fomentations were applied to the painful part and morphia was administered internally.

May 15th.—Surface is now red. Immediately below the right anterior superior iliac spine is a large, soft, fluctuating swelling apparently connected with the induration mentioned above. This has appeared suddenly in the night. About the middle of this soft swelling a small portion of the skin is

quite gangrenous, and feels as if the abscess would soon burst at this point.

An incision was made into this fluctuating swelling under the carbolic spray and five ounces of extremely fæculent-smelling pus escaped. A drainage-tube was inserted and the abscess was treated antiseptically, being covered with "shavings" of dry carbolised gauze.

In eighteen hours the temperature had come down to the normal line; the appetite rapidly improved, and the induration gradually subsided, the patient making an uninterrupted recovery without any further elevation of temperature.

The wound was treated antiseptically throughout. The discharge of pus being very profuse the drainage-tube was not removed till June 3rd.

The patient was then allowed to get up, and left the hospital about three weeks afterwards quite free from any pain, tenderness, or induration in the right iliac region.

The points worthy of remark in this case are those concerning the antiseptic treatment.

1. Although the patient was seriously ill, all febrile and other constitutional symptoms immediately abated after the abscess was opened, and the total duration of this attack was considerably less than the previous ones.

2. It affords an excellent exemplification of the fact that a badly-smelling pus is not necessarily *septic;* for had the pus (which was extremely fæculent) in this case been septic the rapid constitutional and local improvement would not have occurred.

TWO OBSCURE CASES OF OBSTRUCTIVE JAUNDICE.

By W. A. WILLS.

Case 1.—Emma L—, æt. 65, a widow, was admitted into Tillard Ward under Dr. Donkin on March 21st, 1885.

On admission, she was suffering from marked jaundice, with pain and tenderness on pressure over the region of the liver. She was much wasted.

Her previous history was that until the last two or three years she had been an extremely healthy woman, since when she had been losing flesh and getting much weaker.

In August, 1884, she began to be troubled by itching of the skin, which got worse as she got weaker. She first noticed that she was jaundiced about two months ago, when she also found that her urine was dark and stained her linen, and her fæces were clay coloured. The jaundice has gone on increasing in intensity up to the time of admission, with occasional remissions. For a fortnight before coming in she suffered from pain in the abdomen and tenderness on pressure over the region of the liver, with constant headache. She has had no vomiting, but occasionally severe attacks of diarrhœa.

Her family history is good, with the exception that her maternal uncle died "of jaundice" at middle age.

Her condition on admission was as follows:—Deeply jaundiced all over skin and conjunctivæ. Complains of

considerable itching of the skin. She is much emaciated and seems very weak and feeble. Her abdomen is uniformly somewhat distended, and there is great tenderness on pressure over epigastrium and right hypochondrium. Abdominal muscles rigid. The liver dulness extends in nipple line from the sixth rib to about one inch below umbilicus and reaches up to the eighth rib behind. The edge of the liver can be felt through the abdominal wall, reaching from the right anterior superior iliac spine through the umbilicus to the level of about the ninth costal cartilage on the left side. The edge seems fairly smooth, interrupted by a notch near the umbilicus. There were no physical signs nor symptoms of any disease in the thorax, or of any nervous disturbance beyond the headache. Pulse frequent and compressible; temp. 97·2° to 102·8°. Urine 1022, acid, no albumen; bile. Fæces clay coloured.

From this date, March 21st, until the date of her death, May 25th, her symptoms remained much the same. The itching of the skin was very troublesome at first, but passed off after a while. The following short notes indicate the progress of the case:

March 30th.—Sweats profusely at night. Jaundice somewhat deeper.

April 4th.—Has had some slight rigors in the evening lately.

27th.—Rigors have continued every evening, and have lately become more marked. Temp. 97° to 101°. Occasional vomiting for last two or three days; vomit of dark coffee-ground appearance.

May 10th.—Sickness has now ceased. The patient is much more emaciated and the jaundice more marked. She seems extremely weak, and does not take her food well. Rigors followed by profuse sweats continue.

18th.—She now lies in an almost apathetic condition. Does not seem to feel pain unless the abdomen is touched. Rigors continue. Temp. 97° to 102·6°. The physical signs in abdomen remain about the same, except that the area of stomach resonance seems increased.

25th.—Died at 5.30 this morning.

The diagnosis made of this case was obstructive jaundice,

probably due to the pressure of a growth on the common bile-duct; such growth being most likely malignant, and arising from the liver, pancreas, or lymphatic glands.

That the jaundice was obstructive there could be no doubt, both from the constant presence of bile in the urine and its equally constant absence from the fæces; and there did not appear any grave reason to question that its cause was some form of malignant disease, to which both the long-continued emaciation previous to the jaundice and the aspect of the patient seemed to point, as well as the apparent enlargement of the liver and great tenderness on pressure. The reasons which seemed to point to the liver not being the primary or main seat of the disease, were that the wasting had gone on some considerable time previous to the occurrence of jaundice and that there was an absence of any irregularity or nodulation of the surface. Moreover, primary malignant disease of the liver is not common. There was, however, no *positive* evidence of malignant disease anywhere, a point which was insisted on in spite of the apparent probability of the diagnosis. The occurrence of high temperature with rigors was looked upon as being probably due to suppuration taking place at the seat of the malignant growth.

Post-mortem examination (thirty hours after death) by Dr. Hebb).—Body extremely emaciated, surface generally and deeply jaundiced. Lungs emphysematous and œdematous, with some hypostatic engorgement of right base. General slight bronchitis. Heart 8 oz. Some atheromatous patches on valves and on aorta. On opening the abdominal cavity the stomach was seen to occupy almost the whole of area exposed to view, reaching down to the pubes and concealing almost everything except the liver on the right side. The stomach being turned aside, the upper part of the duodenum was also seen to be enormously distended. They were both filled with a dark grumous material of a greenish colour. The gall-bladder was also distended to the size of a turkey's egg, and contained fine biliary sand and also material similar to that in the stomach. The parts in the neighbourhood of the gall-bladder were much stained with bile.

On removing the stomach and duodenum, with gall-bladder

and duct attached, it was found that the duodenum was constricted, about half an inch below the common entrance of the pancreatic and biliary ducts, by a fibrous ring, the lumen of the gut being so far diminished as only to admit of the passage of the tip of the forefinger. The coats of the intestine were much thinner at the seat of this ring, from which they could with difficulty be separated, and the mucous surface of the intestine at the point of stricture was slightly ulcerated. The constricting ring was evidently peritoneal in origin, and was thin in front and thick behind.

An examination of the mucous surface of the intestine showed the entrance of the common duct to be dilated and the papilla to be enlarged and its surface ulcerated, but there was no hindrance to the free passage of a large-sized probe through the duct. On tracing the common duct up to its division into the hepatic and cystic it was found to be perfectly pervious and markedly dilated, which was also true of the cystic and hepatic ducts, but the pancreatic duct was of normal size.

On following the bile-ducts further back into the liver they were found to be dilated in the same way up to their smallest divisions, and in their course were situated many small abscesses, none of which were larger than a pea, that contained pus in various conditions. These abscesses were evidently secondary to the condition of the ducts.

The liver retained its usual shape and weighed 60 oz. The capsule was thickened in two places, at the notch and about the centre of the right lobe, this thickening being due to older abscesses now drying up. The liver was generally of a dark olive green colour, studded with little patches of yellow where the abscesses were just under the surface.

The pancreas, spleen, and kidneys were quite normal.

The greater part of the intestines lay in the pelvic cavity, where they had been forced by the stomach.

There was only one enlarged gland near the head of the pancreas.

Remarks.—The post-mortem examination at once revealed that this was not a case of malignant disease of the liver as it was supposed to be. It may, however, fairly be shown to have been a case of obstructive jaundice, though not due

to any of the more usually recognised causes, and is therefore of great interest and importance. The case then resolves itself *primarily* into one of stricture of the duodenum, the stricture being due to a strangulation of the intestine by a band of peritoneum stretching across the front of it (thus coming under the head of some form of internal hernia); and *secondarily* into a case of obstructive jaundice. Here the first thing to notice is that there was no indication in the history of any such occurrence having suddenly taken place, as the question was more than once asked of the patient whether she had felt any sudden pain or been suddenly sick, with a view of eliciting some fact pointing to gall-stones, but she had always replied emphatically in the negative. Therefore there is nothing distinctive in the history to point to the time at which this occurrence took place. It could not be in any way congenital, and was probably of not very ancient origin from the fact that the intestine below the stricture was not much diminished in calibre. The only indication we have of the time of its occurrence is the period from which she dated the loss of flesh, and this she could only vaguely state as "during the last two or three years." However, such a condition of obstruction being established, it is obvious that there must have been a considerable effect produced behind it, and that it was so is evidenced by the enormous dilatation of the stomach and duodenum. The obstruction was not complete, and therefore there was never obstinate constipation, and due no doubt to the same cause was the fact that sickness was never a prominent symptom in the case. The patient was sick several times a day for about a week at a late stage of the case, and that was all.

This dilatation of the stomach must have been gradual, and this may account in some way for its not causing more symptoms.

The theory that has been proposed to explain the obstructive jaundice is as follows:—The stricture of the intestine produced considerable dilatation behind it, which affected both the stomach and duodenum, and by putting the wall of the latter on the stretch so pressed on the part of the common bile-duct, passing obliquely through the gut, that it produced complete obstruction. This obstruction existing, the *vis a*

tergo of the bile was not sufficient to overcome it, but was expended in causing a uniform dilatation of the bile-ducts down to their smallest ramifications. An experiment to prove this by artificially producing the same conditions has been tried, but yielded no definite results. Further investigation is desirable though difficult.

That wasting should be a prominent symptom was natural enough when the condition of the stomach and intestines is taken into consideration. A stomach so dilated and wasted was evidently not likely to perform its functions; it was scarcely anything more than a fibrous bag, and but little properly prepared food could therefore have passed beyond the stricture, the bulk of it being discharged per rectum unacted on by whatever influence the intestines might exert.

The extreme wasting consequent on these conditions seemed to point strongly to the existence of some malignant disease, the real cause being, of course, quite beyond the powers of diagnosis or even conjecture.

The abscesses in the liver were probably due to the irritation and pressure of the retained bile in the bile-ducts of the liver setting up a condition of inflammation which ran on to suppuration. The suppuration easily accounts for the rigors, sweating and high temperature.

If the explanation of this case be the true one, as it would appear to be, a very important cause of obstructive jaundice, rare though it undoubtedly must be, is added to those already known.

Case 2.—Rose C—, æt. 60, servant, was admitted into Tillard Ward on May 30th under Dr. Donkin.

The patient says that she was first taken ill during last December. She suffered from pain and soreness in the lumbar region. In February last she was laid up in bed with bronchitis, when the pain in the back became more severe. She first noticed jaundice three weeks ago, since when she has felt sick frequently, but never actually vomited. The urine has been dark and fæces clay coloured.

She has lost flesh for the last two or three years, especially the last winter. Has had no previous illness. Family history good, except that one brother died of phthisis.

On admission her condition was as follows :—The patient, who is the subject of old Pott's disease of the spine, is lying in bed looking much emaciated, and deeply jaundiced. At the lower part of the abdomen, in the right iliac and umbilical regions, there is a large irregularly-rounded tumour of the size of a small cocoa-nut, of stony hardness, which is slightly moveable, and does not appear to be connected with the uterus.

This tumour has been present for the last twenty years, increasing somewhat in size since first noticed, but decreasing somewhat, according to the patient's belief, in the last few years.

There is no enlargement of the liver, which is separated from the tumour by a distinct gap. The gall-bladder was felt to be much distended.

Heart-sounds clear; action irregular; pulse 100.

Lungs emphysematous.

Tongue dry, flabby, and furred; bowels open, fæces clay coloured; urine acid; no albumen; bile.

June 8th.—Nausea after food (but no vomiting), which continued for about ten days.

22nd.—Moist râles all over both lungs; no dulness; expectoration profuse; jaundice deeper.

29th.—Bronchitis got gradually worse, and patient died during the night.

The diagnosis in this case was obstructive jaundice, probably due to an impacted gall-stone. This conclusion was arrived at from the fact that there was no enlargement of the liver and no tumour pressing on the gall-duct evident, and no reason to suspect malignancy, while the obstruction was obviously complete; at the same time there was no evidence of any marked or paroxysmal pain, such as would probably accompany the presence of a gall-stone in the duct which had not become impacted. The tumour in the lower part of the abdomen evidently had no connection with the jaundice, and was considered by Dr. Potter to be a calcified fibroid of the right ovary.

Post-mortem examination (thirty-four hours after death) by Dr. Hebb.—Body extremely emaciated, surface generally and deeply jaundiced, but most markedly so over upper half.

There is a tumour about the size of a fœtal head projecting from the right hypogastric region.

On opening the abdominal cavity the tumour is found to be firmly adherent to the brim of the pelvis and covered by the peritoneum. It is extremely hard, and ossified in great part with numerous areas of softening. Immediately to the left of this tumour is a body which resembles the fundus of the uterus and which was found on incision to contain some altered blood or bloody fluid, and a myoma about the size of a small walnut. This fundus is connected by a cord one inch in length with the cervix uteri, at the top of which latter are two or three polypi. The length of the cervix itself is about one inch. Both ovaries were present and far away from fundus, cervix uteri, and also from the tumour.

The right ovary is about the size of a bean, and the left of a pigeon's egg. What appear to be the fimbriated extremities of the Fallopian tubes are two collections of cysts. The large tumour is evidently a subperitoneal myoma.

Nothing abnormal about the bladder or intestines.

The liver is small and of a dark olive green colour.

The gall-bladder and its ducts are much distended, the former being as large as a turkey's egg, and it contains a thick black fluid which has no trace of viscidity. The hepatic papilla in the duodenum was perfectly prominent, its orifice patulous, and the duct pervious for at least one inch. Beyond this no passage could be found along the duct, which was apparently perfectly obliterated. There were no traces of gall-stone or of biliary gravel, nor any signs of inflammation or of adhesions about the gall-bladder, gall-ducts, or duodenum.

The pancreas, which retained its normal size, was *much indurated, especially at the head.* On incision into it no trace of normal structure was visible to the naked eye. The gland, and especially the head, had been transferred into a mass of fibrous tissue, channelled out by numerous passages, which are the dilated pancreatic ducts. There were no enlarged glands in the abdominal cavity.

The cortices of the kidneys were somewhat atrophied and the capsules adherent. Costal cartilages ossified. Pleuræ normal. Lungs extremely emphysematous with signs of

chronic bronchitis. Aorta and its branches very atheromatous.

This was apparently a case of chronic pancreatitis of unknown cause, that had resulted in fibroid degeneration of the substance of the pancreas, which by its natural contraction had gradually obliterated the gall-duct and so produced complete obstructive jaundice.

The myoma of the uterus obviously had nothing to do with the jaundice.

The interest of these two cases, which, curiously enough, immediately succeeded one another in the same bed in the same ward, lies in the extremely uncommon nature of the conditions producing the obstruction of the gall-duct. The *probable* diagnosis in neither case was borne out by the post-mortem examination; but this is not to be wondered at when the nature of the affections is considered. They are now offered as two uncommon cases of structural disease, producing the common condition of obstructive jaundice; the one, viz. the *duodenal stricture,* causing the jaundice by circumstances of pressure on the duct which were only in force during life; the other, the case of *pancreatitis* (?), involving the course of the gall-duct and so producing its obliteration, but not evincing any of the marks of what is known as malignant growth.

CASE

OF

PERITONITIS AND ULCERATION OF THE PERITONEAL SURFACE OF STOMACH AND LARGE INTESTINE,

WITH SYMPTOMS OF PROFOUND ANÆMIA AND DIARRHŒA, FOLLOWED BY FÆCAL VOMITING.

By W. G. WEAVER.

Rachael T—, kitchenmaid, æt. 19, was admitted on 17th July, 1885, suffering from vomiting and diarrhœa. The previous history of this patient was extremely good; in fact, until three weeks before admission she had never been laid up. The history of the present illness ran as follows:—In consequence of her boots hurting her, she had removed them and gone on doing her work on the damp floor without any covering to her feet. After a few hours the following symptoms developed: she was seized with pains in her limbs and head, "feverishness," diarrhœa, and vomiting. She was treated outside the hospital, and the vomiting and diarrhœa ceased, but after a fortnight (during which time she did her work) the vomiting and diarrhœa returned and continued for six days, when she came to the hospital.

On admission, she was intensely pallid and waxy looking, and complained of severe pain in the region of abdomen, also of pain in præcordial region, dyspnœa, and great weakness caused by the obstinate vomiting and diarrhœa.

On examination her condition was as follows:—*Lungs*, with the exception of moist bronchitic sounds, healthy.

Heart.—Severe pain over præcordium; apex-beat felt a little to the left of nipple line in fourth space; sounds feeble, especially the first. At base, over a spot corresponding to

a circle half an inch in diameter, a very well marked to-and-fro rub was heard, probably exocardial. Cardiac dulness increased upwards to second rib and outwards beyond nipple line, also to right of sternum.

Abdomen generally distended, tender, and at a spot to right of umbilicus, corresponding to part of right umbilical and iliac regions, there was a well-marked prominence which was acutely tender and also gave a distinct sensation of resistance. No rash of any description was visible.

Tongue clean, small, pointed. Temp. 104·2°.

Urine 1020, acid, no albumen.

Pil. creasoti ♏j qtâ. quâque horâ; brandy ʒij every hour and a half. Milk diet.

July 18th.—Vomiting and diarrhœa continue. Pericardial rub not so well marked, but still heard with first sound. Ordered in addition Pulv. Doveri gr. x (ter). Temp. 101°—103°.

19th.—Vomiting continues but diarrhœa has stopped. Complains of dyspnœa. Cardiac dulness increased up to upper border of second rib. Sounds at apex muffled. At base first sound prolonged, well-marked "rub," systolic in time, heard over second space. Pulse 132, small, irregular. Abdomen still distended, but not so tender since the diarrhœa has ceased. Tongue red, irritable, coated at edges. Temp. 101·6°—103·4°.

20th.—Vomiting occurred only twice; no fresh diarrhœa; abdomen same. Heart: increased cardiac dulness not so marked. Rub heard with systolic sound at base.

21st.—Vomited once since yesterday. No diarrhœa. Tenderness over præcordium not so marked; rub only heard occasionally; dyspnœa disappeared. 8 p.m. Vomiting increased, three or four times an hour, of a very disagreeable character; complains of pain over chest and cough; bronchitic sounds all over chest. She was ordered a beef-tea, egg, and brandy enema every four hours. Temp. 101°—103·6°.

22nd.—Vomited once since 12 last night; no diarrhœa; retained enema; pericardial rub not heard; heart-sounds more distinctly audible. Temp. 100·6°—102·6.°

24th.—Vomiting and diarrhœa both returned, the vomit being essentially of the same nature as the material passed from the bowel; patient very prostrate.

25th.—Vomiting and diarrhœa both continued incessantly, uncontrolled by morphia injection; patient died at 4.30 a.m. this morning. Temp. 100·4°—105·6°.

The *post-mortem* was made by Mr. Hebbert eleven hours after death. The body was well nourished, and rigor mortis still persisted. On opening the abdomen the intestines were seen matted together with recent lymph. In the cavity of the peritoneum was much yellowish turbid fluid which consisted of the contents of the stomach and intestines mingled with the effused lymph and fluid of acute peritonitis. The contents of the stomach and bowel were noticed to escape from several small holes in the walls of the organs. The stomach was removed and examined, and it was found that there were three ulcers on the anterior surface. These ulcers had apparently begun in the peritoneal coat, and had worked inwards, so that the floor merely consisted of the mucous coat of the stomach; the edges were thickened and everted. In the floor of one of the ulcers was a small hole through which the contents were passing. The ulcers varied in size from a threepenny-piece to that of a sixpence, and were situated near the great curvature, and midway between the cardiac and pyloric ends. On the small curvature near the pylorus were two or three similar ulcerations. On examining the intestines, several ulcers of a like nature were found in the walls of the cæcum, and from one of these, fæces were escaping by a minute opening. The ileum for three feet above the ileo-cæcal valve presented acute rosy injection with swelling of the mucous membrane and enlarged Peyer's patches. Between the liver and diaphragm a large abscess with thick walls and purulent contents was discovered. The liver weighed 59 oz., the substance pale and fatty. The kidneys weighed, left 4¾ oz., right 5¾ oz. The cortices were enlarged, pale, and fatty. The heart weighed 7½ oz., the muscular substance was soft and pale, and the valves normal. There were signs of bronchitis in both lungs. The spleen was much enlarged, and of a reddish-brown colour, soft and friable in consistence. The whole peritoneal surface of the uterus and ovaries was covered by a thick, grey, very adherent membrane, which extended throughout Douglas's

pouch, and over the broad ligament on either side; the uterus was virgin.

Comment.—This case was highly interesting not only from the clinical features presented and the difficulty of arriving at a correct diagnosis, but also from the remarkably unique character presented by the intestines post mortem. From the intense pallor and listlessness of the girl on admission the idea crossed one's mind that there had been extreme loss of blood, for, according to her account, she had always been of good colour until her illness three weeks before; but on the most minute cross-examination there was no history whatever of any hæmatemesis or melæna. Then again on examination of the abdomen, the localised tenderness, the prominent tumour to the right of the umbilicus, and the obstinate diarrhœa at first followed by constipation, pointed rather to localised peritonitis with possibly ulceration of the intestine on the mucous surface. What was the cause of the peritonitis? Although "cold" is given as one of the possible causes of peritonitis, and also "idiopathic" peritonitis is spoken of, I am sceptical as to whether either was the cause in this case. Then as to the ulcers found post mortem. What was their origin? There was clearly no sign of *any ulceration* having commenced internally, that is, on the mucous surface, and in only two instances was there a clear penetration, namely, the stomach and cæcum respectively; in all there was evidence of chronic inflammation which must have begun before the date given by the patient as the onset of her illness. In most of the ulcers the peritoneal and muscular coats were destroyed, and only in the two cases mentioned above was there complete ulceration through all coats.

From the greatly thickened condition of Douglas's pouch and the tissues generally around the uterus I am inclined to think this to have been the starting-point, and to look upon the ulcers as being due to probably septic absorption; in fact, more or less a species of pyæmia; or is it utterly impossible to conceive of there having been a series of localised spots of peritonitis where adhesions had taken place, and which from the action of the bowels, in both vomiting and diarrhœa, had given way, and so originated the starting-points of the ulceration?

MEDICAL AND SURGICAL REPORTS.

REPORT

OF

CASES TREATED IN THE MEDICAL WARDS DURING THE YEAR 1884.

By CHARLES A. HEBBERT,
MEDICAL REGISTRAR.

Number of patients in Hospital, Jan. 1st, 1884			77
" " " Dec. 31st, 1884			71
Treated during the year			935
Admitted to Medical Wards during the year			858
Of these—Males	421		
Females	437		
	—858		
Average number of patients in Hospital			67·3
Average stay in Hospital of each patient			25·23 days.
Recovered or relieved:			
Males		337	
Females		370	
		—	707
Unrelieved, including those sent to Surgical or Obstetrical Wards:			
Males		12	
Females		11	
		—	23
Died:			
Males		72	
Females		56	
		—	128
			858

Table A.

Disease.	Jan. to March.	April to June.	July to Sept.	Oct. to Dec.	Sex. Males.	Sex. Females.	Sex. Total.	Age. Under 5 yrs.	Age. 5—10.	Age. 10—20.	Age. 20—30.	Age. 30—40.	Age. 40—50.	Age. 50—60.	Age. Over 60.	Result. Death.	Result. Unrelieved.	Result. Relieved.	No.
General Diseases:																			
Group A:																			
Scarlet fever	1	1	1	1	3	1	4	...	...	2	2	...	...	...	...	...	...	4	I. 1—4
Variola	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	1	...	5
Whooping-cough	...	6	1	...	5	2	7	4	3	...	...	...	...	...	...	...	...	7	6—12
Diphtheria	7	4	8	2	13	8	21	15	4	1	1	...	...	...	...	14	...	7	13—33
Febricula	...	1	2	...	3	...	3	...	...	...	3	...	...	...	...	...	...	3	34—36
Enteric fever	9	4	4	2	12	7	19	1	...	9	8	1	...	...	...	3	...	16	I A. 1—19
Intermittent fever	...	...	1	...	1	...	1	...	...	...	...	1	...	...	...	...	...	1	I. 37
Erysipelas	1	3	3	1	3	5	8	1	...	3	2	2	...	...	...	1	...	7	38—45
Syphilis	1	...	1	2	2	2	4	...	...	...	2	1	...	1	...	...	...	4	46—49
Group B:																			
Poisons:																			
Lead	...	1	...	1	2	...	2	...	...	...	...	1	1	...	...	...	...	2	50—51
Mercury:																			
White precipitate	1	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	52
Bichromate of potash	1	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	1	53
Alcohol	2	...	...	...	1	1	2	...	...	...	1	1	...	...	...	...	...	2	54, 55
Group D:																			
Not classified:																			
Rheumatic fever	30	21	32	17	46	54	100	...	16	33	29	14	5	3	...	3	...	97	II. 1—100, *vide* Table B
Rheumatism, including subacute and chronic	7	6	7	4	15	9	24	...	1	1	5	6	(	4	1	...	...	24	III. 1—24
Tuberculosis	6	3	...	2	6	5	11	6	1	2	1	1	...	...	...	11	...	...	25—37
Scrofula	...	1	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	1	38
Rickets	2	1	1	1	1	3	4	4	...	...	.	...	...	...	...	...	...	4	39—42
Cretinism	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	1	43
Myxœdema	...	...	...	1	...	1	1	...	.	...	...	1	...	...	...	...	...	1	44
Purpura	1	1	1	1	...	4	4	...	...	1	...	1	1	...	1	...	...	4	45—48
Anæmia and chlorosis	8	5	2	10	...	25	25	...	...	13	12	...	...	...	...	...	...	25	49—77
Idiopathic anæmia	...	1	...	2	2	1	3	...	...	...	...	2	...	...	1	1	2	...	58, 72—74
Hæmophilia	...	1	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	1	78
Diabetes	...	...	1	...	...	1	1	...	...	...	...	...	...	1	...	1	...	...	79
Glycosuria	...	...	1	...	...	1	1	...	...	...	...	...	1	...	...	...	...	1	80
Diseases of the Nervous System:																			
Brain:																			
Meningitis	1	1	1	...	...	3	3	1	1	...	...	...	1	...	...	2	...	1	IV. 1—3
Hydrocephalus	...	1	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	1	4
Hæmorrhage	2	1	1	1	4	1	5	...	...	...	...	...	1	2	2	5	...	...	5—9
Softening	2	...	...	...	...	2	2	...	...	...	...	1	1	...	...	1	1	...	10—11
Tumour	...	1	...	...	1	...	1	...	...	...	...	1	...	...	...	...	1	...	12
Syphilitic disease	1	1	...	1	2	1	3	...	...	...	...	1	2	...	...	...	1	2	13—15
Hemiplegia	3	3	2	4	6	6	12	...	...	...	...	5	2	4	1	...	...	12	16—27

TABLE A—*continued.*

DISEASE.	Jan. to March.	April to June.	July to Sept.	Oct. to Dec.	Sex. Males.	Sex. Females.	Sex. Total.	Age. Under 5 yrs.	Age. 5—10.	Age. 10—20.	Age. 20—30.	Age. 30—40.	Age. 40—50.	Age. 50—60.	Age. Over 60.	Result. Death.	Result. Unrelieved.	Result. Relieved.	No.
DISEASES OF THE NERVOUS SYSTEM—*continued.*																			
Cord:																			
Sclerosis:																			
i. Infantile paralysis	2	...	2	1	2	3	5	1	3	1	...	...	...	...	...	...	...	4	28—32
ii. Lateral sclerosis	1	2	...	1	4	...	4	...	...	...	...	2	1	1	...	...	...	4	33—36
iii. Tabes dorsalis	...	...	4	1	4	1	5	...	...	...	1	3	1	...	...	1	...	4	37—41
Myelitis	...	1	2	...	2	1	3	...	...	...	1	2	...	...	...	...	...	3	42—44
Pseudo-hypertr. paralysis	...	...	1	...	1	...	1	1	...	...	...	...	...	...	...	...	...	1	45
Diphtheritic paralysis	1	1	...	...	1	1	2	1	...	1	...	...	...	...	...	...	...	2	46, 47
Choreic paralysis	...	...	1	...	...	1	1	...	...	1	...	...	...	...	...	...	...	1	48
Facial paralysis	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	49
Paralysis of extensors of right hand from crutch pressure	...	1	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	1	50
Wasting of muscles after chronic arthritis	...	...	...	1	1	...	1	...	...	...	1	...	...	...	...	...	...	1	51
Neuralgia:																			
i. Trigeminal	2	...	...	...	...	2	2	...	...	...	...	...	1	1	...	...	...	2	52, 53
ii. Sciatica	1	...	1	2	4	...	4	...	...	...	...	1	1	...	2	...	...	4	54—57
Headache	...	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	1	58
Sunstroke	...	1	1	...	2	...	2	1	...	1	...	...	...	...	...	...	...	2	57, 58
Vertigo	1	1	...	1	1	2	3	...	...	...	2	...	1	...	...	...	...	3	59—61
Syncope	2	...	...	...	2	...	2	...	...	...	1	...	...	...	1	...	...	2	62, 63
Infantile convulsions	...	1	2	1	3	1	4	4	...	...	...	...	...	...	...	...	...	4	64—67
Epilepsy	1	...	2	2	5	...	5	...	1	...	...	1	2	...	1	...	...	5	68—72
Chorea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Table C
Hysteria	3	1	1	2	...	7	7	...	...	4	2	1	...	...	...	...	...	7	73—79
Ecstasy	...	1	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	80
Amnesia	...	...	...	1	1	...	1	...	...	1	...	...	...	...	...	...	...	...	81
Mental diseases:																			
Melancholia	...	1	...	...	1	...	1	...	...	...	...	...	1	...	...	...	1	...	82
Amentia	...	1	...	...	1	...	1	...	...	...	...	...	1	...	...	...	1	...	83
General paralysis	...	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	84
Delirium tremens	...	1	1	5	5	2	7	...	...	...	1	4	2	...	...	1	...	6	85—91
DISEASES OF THE CIRCULATORY SYSTEM:																			
Dilatation of heart	3	1	3	...	4	3	7	...	...	...	...	3	1	...	3	2	...	5	V. 1—7
Pericarditis	...	1	...	...	1	...	1	...	...	...	...	...	1	...	...	1	...	...	8

TABLE A—*continued.*

DISEASE.	Jan. to March.	April to June.	July to Sept.	Oct. to Dec.	Sex.			Age.								Result.			No.
					Males.	Females.	Total.	Under 5 yrs.	5—10.	10—20.	20—30.	30—40.	40—50.	50—60.	Over 60.	Death.	Unrelieved.	Relieved.	
DISEASES OF THE CIRCULATORY SYSTEM—*continued.*																			
Endocarditis (not arising in hospital):																			
Mitral:																			
i. With presyst. murmur	2	1	1	1	1	4	5	...	...	2	1	1	1	...	...	...	...	5	9—13
ii. With systolic murmur	2	3	8	9	9	13	22	...	...	9	4	1	4	2	2	3	...	19	14—35
iii. With double murmur	2	1	...	2	1	4	5	...	1	3	...	1	...	...	...	1	1	3	36—40
Aortic:																			
i. With systolic murmur	1	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	1	41
ii. With diastolic murmur	2	...	2	1	3	2	5	...	...	1	2	1	1	...	...	1	...	4	42—46
iii. With double murmur	6	6	6	7	15	10	25	...	...	2	7	3	5	5	3	8	...	17	47—71
Tricuspid, with regurgitant bruit	1	...	...	1	...	2	2	...	...	...	...	1	1	...	...	2	...	...	72, 73
Aortic aneurism:																			
i. Thoracic	...	4	3	1	6	2	8	...	...	...	1	4	3	...	...	3	...	5	74—81
ii. Abdominal	1	...	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	1	82
Exophthalmic goitre	1	...	1	...	...	2	2	...	...	...	...	...	1	...	1	...	...	2	83, 84
Angina pectoris	...	...	1	...	1	...	1	...	...	...	...	...	1	...	...	...	...	1	85
DISEASES OF THE RESPIRATORY SYSTEM:																			
Œdema of the larynx	...	...	...	1	...	1	1	...	...	...	...	...	...	1	...	...	...	1	VI A. 1
Laryngitis	...	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	1	2
Asthma	1	...	...	1	...	2	2	...	...	...	1	1	...	...	...	...	...	2	3, 4
Emphysema	...	1	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	5
Bronchitis:																			
i. Acute	9	5	5	3	6	16	22	10	2	3	2	5	...	...	...	4	...	18	6—27
ii. Chronic	3	2	3	3	8	3	11	...	...	...	...	1	5	3	2	1	...	10	28—38
Pneumonia:																			
i. Lobular	3	4	2	4	3	10	13	10	2	1	...	...	...	...	...	5	...	8	39—51
ii. Lobar	14	29	8	8	43	16	59	...	8	13	15	12	7	1	3	8	1	50	52—110
Pleurisy:																			
i. Effusion	3	2	7	2	9	5	14	1	1	1	5	2	1	2	1	...	...	14	111—125
ii. Empyema	1	...	2	4	7	...	7	1	3	1	2	...	...	...	...	...	...	7	126—132
Phthisis, including early phthisis with hæmoptysis	12	21	22	12	35	32	67	1	1	5	25	21	11	2	1	22	...	45	VI B. 1—67
Malignant disease of lungs	1	...	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	10
DISEASES OF THE DIGESTIVE SYSTEM:																			
Mouth:																			
Stomatitis	...	1	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	1	VII. 1

TABLE A—*continued.*

DISEASE.	Jan. to March.	April to June.	July to Sept.	Oct. to Dec.	Sex. Males.	Sex. Females.	Sex. Total.	Age. Under 5 yrs.	Age. 5—10.	Age. 10—20.	Age. 20—30.	Age. 30—40.	Age. 40—50.	Age. 50—60.	Age. Over 60.	Result. Death.	Result. Unrelieved.	Result. Relieved.	No.
DISEASES OF THE DIGESTIVE SYSTEM — *continued.*																			
Pharynx and Œsophagus:																			
Dysphagia	...	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	2
Carcinoma	...	1	...	1	...	2	2	...	...	...	...	...	...	1	1	2	...	...	3, 4
Tonsillitis	7	8	8	2	10	15	25	3	3	11	8	...	...	...	...	...	...	25	5—29
Stomach:																			
Dyspepsia	8	3	1	2	3	12	14	...	1	6	4	2	1	...	...	...	...	14	31—44
Vomiting	...	1	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	45
Hæmatemesis	2	2	4	4	4	8	12	...	...	1	7	2	2	...	...	...	...	12	46—58
Ulcers	...	...	2	4	1	5	6	...	...	1	3	1	1	...	...	...	...	...	51, 54—58
Carcinoma	2	2	2	5	7	4	11	...	...	...	...	3	1	3	4	7	2	2	59—69
Intestines:																			
Diarrhœa	...	2	14	1	7	10	17	2	1	3	3	4	3	...	1	...	...	17	70—86
Constipation	1	4	2	1	1	7	8	...	...	3	1	1	2	...	1	...	...	8	87—94
Colic	2	4	2	1	3	6	9	1	...	3	3	1	...	1	...	...	...	9	95—103
Typhlitis	2	3	1	...	2	4	6	...	...	1	4	1	...	...	...	...	...	6	104—109
Enteritis	1	...	...	1	2	...	2	...	...	...	...	2	...	...	...	...	...	2	110, 111
Ulceration of vermiform appendix	1	...	...	...	1	...	1	...	...	1	...	...	...	...	...	1	...	...	112
Intussusception	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	1	...	...	113
Liver:																			
Jaundice	3	1	2	1	5	2	7	...	2	1	1	2	1	...	...	...	...	7	VII B. 1—7
Enlargement	...	...	2	1	1	2	3	...	...	...	...	1	...	1	1	...	...	3	8—10
Gall-stone colic	...	3	...	...	...	3	3	...	...	...	1	1	...	1	...	...	...	3	11, 13
Cirrhosis	3	2	5	2	4	8	12	...	...	...	...	2	2	6	2	3	...	9	14—25
Carcinoma	1	..	1	...	...	2	2	...	...	...	...	1	...	1	...	1	...	1	26, 27
Peritoneum:																			
Ascites	1	1	1	2	2	3	5	1	...	...	1	...	...	3	...	...	...	5	28—32
Tumour	...	...	...	1	...	1	1	...	...	...	...	...	...	1	...	...	...	1	33
DISEASES OF THE URINARY SYSTEM:																			
Acute nephritis	3	1	4	3	7	4	11	1	1	2	5	1	...	1	...	1	...	10	VIII. 1—11
Chronic nephritis:																			
i. Large white	8	...	1	1	7	3	10	...	...	1	1	3	3	1	1	2	...	8	12—21
ii. Contracted	1	5	4	1	5	6	11	...	...	...	1	2	4	3	1	4	...	7	23—32
Pyelitis	1	...	1	...	1	1	2	...	...	1	1	...	...	...	...	...	...	2	33, 34
Nephritic abscess	...	...	...	1	...	1	1	...	...	...	...	1	...	...	...	1	...	...	35
Calculus in kidney	1	...	1	...	1	1	2	...	...	...	...	...	1	1	...	...	...	2	36, 37

Table A—*continued.*

Disease.	Jan. to March.	April to June.	July to Sept.	Oct. to Dec.	Sex. Males.	Sex. Females.	Sex. Total.	Age. Under 5 yrs.	Age. 5—10.	Age. 10—20.	Age. 20—30.	Age. 30—40.	Age. 40—50.	Age. 50—60.	Age. Over 60.	Result. Death.	Result. Unrelieved.	Result. Relieved.	No.
Diseases of the Skin:																			
Acute rosacea	1	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	1	IX. 1
Eczema	1	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	2
Psoriasis	...	1	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	3
Diseases of Women:																			
Ovaritis	...	2	...	...	...	2	2	...	...	...	2	...	...	...	...	...	...	2	4, 5
Ovarian tumour	...	2	...	...	...	2	2	...	...	...	...	...	1	...	1	...	...	2	6, 7
Pregnancy (vomiting)	...	...	1	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	8
Milk fever	...	2	...	...	...	2	2	...	...	...	1	1	...	...	...	...	...	2	9, 10
Phlegmasia dolens	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	1	11
Retroflexion	...	1	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	1	12
Uterine complaints transferred to Arden ward	...	1	...	1	...	2	2	...	...	...	2	...	...	...	...	...	2	...	13, 14
Various:																			
Lipomata	...	1	...	...	1	...	1	...	...	...	...	1	...	...	...	...	1	...	15
Tænia solium	...	1	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	16
Disease of cervical vertebræ	...	...	1	...	...	1	1	...	1	...	...	...	...	...	...	...	...	1	17
Abscess:																			
i. Neck	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	1	18
ii. Thigh	...	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	1	19
iii. Lumbar	...	...	1	...	...	1	1	...	...	...	...	1	...	...	...	...	...	1	20
iv. Rectal	...	...	...	1	1	...	1	...	...	...	...	1	...	...	...	...	...	1	21
Hospital throat	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	1	22
Ill-feeding	1	1	3	...	3	2	5	4	...	...	...	...	1	...	...	...	...	5	23—27
Debility	2	3	...	1	1	5	6	...	...	2	2	2	...	...	...	...	...	6	28—33
Undiagnosed	2	4	1	2	5	4	9	...	...	2	4	...	2	1	...	...	9	...	34—42

Table B.—*Enteric Fever.*

Only 19 cases of enteric fever were treated in the hospital during 1884.

The average stay in the hospital of each patient was 54 days, so it appears that the cases were rather prolonged.

Two patients suffered relapse, six had hæmorrhage from the bowels, and thirteen more or less profuse diarrhœa. In the remaining cases the bowels were constipated.

Three deaths occurred, the cases being those of young men aged 20, 17, and 22 respectively.

The cause assigned was generally bad drainage, and in support of this it may be mentioned that a family of three brothers and one sister were admitted into the hospital, and it was said that two more brothers were ill with enteric at their own home, and in another case, a brother and sister were admitted within a few days of each other.

TABLE B—*continued.*

No. and name.	Month admitted	Sex.	Age.	Onset.	Character.	Fever.	Days in hosp.	Result.	Treatment.	Remarks.
1 E. B.	Jan.	M.	18	Headache, diarrhœa	Admitted in 3rd week; bronchitis, spleen enlarged, moderate diarrhœa, and night delirium; long convalescence	14 days' fever; highest temp. 104°	56	Recov.	Acid. hydrochlor. dilut.	Patient had attack of facial erysipelas about the end of the 4th week.
2 L. M. W.	"	F.	31	Giddiness, headache, thirst, deafness	Admitted on 16th day; patient weak and tremulous, but not delirious; urine albuminous; constipation at first; some diarrhœa towards the end of the 4th week	14 days' fever; highest temp. 104°; gradual subsidence after 4 days of fever between 102°–104°	44	"	"	—
3 H. H.	"	M.	4	Headache, abdominal pain, diarrhœa	Admitted in early part of 3rd week; there was very profuse diarrhœa, which lasted 23 days	14 days' fever; highest temp. 104·4°	40	"	Enema amyli, Haust. bismuth c. opio	The diarrhœa lasted 8 days after the fever had subsided. Two children in the same house with enteric.
4 A. N.	"	F.	13	Nausea, faintness, headache	Admitted in 2nd week; rash appeared on 11th day; bowels constipated throughout illness; no serious symptoms	19 days' fever; highest temp. 101·8°	58	"	Enema simplex, port wine, Acid. hydrochlor. dilutus	The illness began with an attack of tonsillitis.
5 R. A.	Feb.	M.	11	Headache, epistaxis, nausea, pain in neck	Admitted at end of 3rd week; moderate rash; bowels confined throughout; night delirium; both spleen and liver enlarged, and palpable below costal margin	10 days' fever; highest temp. 103·4°	33	"	—	—
6 C. L.	"	M.	25	Nausea, weakness, giddiness, pain in abdomen	Admitted on 7th day; severe attack, much prostration; bronchitis, copious rash, hæmorrhage from bowels on 11th day, slight at first, but very profuse on the 14th day; the blood continued	17 days' fever; during first attack highest temp. 104·8°; 14 days' fever during relapse,	83	"	Pil. plumbi c. opio, brandy	The convalescence was very long, as patient was so much reduced by the fever, and was suffering from albuminuria.

					to pass till the 18th day; from this time he improved gradually, the fever subsiding about the end of the 4th week. On the 35th day he suffered a relapse, which lasted 14 days; during relapse he again had rash over abdomen, but no hæmorrhage nor diarrhœa	highest temp. 103·4°				
7 L. H.	March	M.	24	Pain in head, giddiness, epistaxis, general pains	Admitted on 10th day; severe attack, with much weakness; diarrhœa very profuse; rash copious; general bronchitis; urine albuminous	26 days' fever; highest temp. 103·4°	57	„	Haust. potass. citratis, Enema amyli c. opio, brandy	—
8 W. B.	„	M.	20	Pain in head, giddiness, epistaxis, weakness, abdominal pain, diarrhœa	Admitted on 10th day; fatal attack; great prostration from the first; most profuse diarrhœa, with hæmorrhage, in the 3rd week; copious rash; night delirium and sleeplessness. Died on 28th day in hospital	Fever during whole stay; for 23 days between 102°–104°; highest temp. 105°	28	Death	Brandy, Haust plumb. c. opio, Enemata amyli	Patient's two brothers died of enteric, and two other relatives suffered in the same house. P.M.—Bronchitis both lungs; consolidation of posterior half of both lower lobes; spleen 11 oz., purple in colour, and very friable; general acute peritonitis, and ulceration of ileum, cæcum, and rectum; kidneys fatty.
9 J. B.	„	M.	16	Giddiness, epistaxis, headache, &c.	Admitted on 8th day; rash appeared on 10th day; bowels open daily, no diarrhœa; bronchitis; spleen enlarged and palpable	13 days' fever; highest temp. 103·4°	57	Recov.	—	Brother of No. 8 case.
10 G. G.	May	M.	17	Sickness, abdominal pain, profuse diarrhœa	Admitted end of 2nd week; fatal attack; very profuse diarrhœa, with hæmorrhage, on 20th day; great prostration from the first; sordes on lips and teeth; bronchitis; albuminous urine. Death on 24th day of illness	8 days' fever; temp. 103°–104°; highest temp. 104·4°, on the day of his death	8	Death	Brandy	The patient got out of bed during one night while delirious, and the hæmorrhage came on two hours after.

TABLE B—*continued.*

No. and name.	Month admitted	Sex.	Age.	Onset.	Character.	Fever.	Days in hosp.	Result.	Treatment.	Remarks.
11 E. G.	May	F.	14	Pain in head, epistaxis, abdominal pain	Admitted in 1st week; rash appeared on 8th day; bowels confined; much weakness; urine albuminous; good recovery	13 days' fever; highest temp. 104·6°	43	Recov.	Port wine	Sister of No. 10 case.
12 A. B.	June	F.	19	General pains, giddiness, headache, abdominal pain	Admitted on 5th day; rash on 9th day; constipation at first, but some diarrhœa through the 3rd week; night delirium; prostration; bronchitis; good recovery	30 days' fever; for 14 days between 102°–104°, then 101°–103°, then 98°–102°, and so gradually fell	51	„	—	—
13 D.C.N.	„	M.	24	Headache, sickness, abdominal pain	Admitted at end of 1st week; copious rash; profuse diarrhœa; prostration; hæmorrhage from bowels on 14th day; patient became very ill, and passed motions involuntarily. On the 25th day sudden collapse, with cold extremities and small rapid pulse. He rallied from this, and for 3 weeks had nightly rise of temperature, followed by profuse sweatings; this ceased after an attack of profuse diarrhœa, and patient made a good recovery	40 days' fever; temp. for the first two weeks from 100°–102°; it then went up to 103° at night, and during the sweatings the temp. was 103° and 104° each night; at collapse it sank to 96°	86	„	Brandy, Enemata amyli, Quin. sulphat.	—
14 W. A.	July	F.	20	Abdominal pain, headache, &c.	Insufficient notes	No report	100	„	—	—
15 E. H.	Aug.	F.	18	General pains, headache,	Admitted in 3rd week; rash slight; constipation in 3rd week, followed by profuse diar-	21 days' fever; highest temp. 105·4°	96	„	Potass. bromid., with Chloral hy-	Another person had enteric fever in the same house.

				giddiness, sickness	rhœa; very sleepless and restless, but no urgent symptoms. Good recovery				drate for the restlessness	
16 M. L.	„	F.	23	Pain in head, giddiness, abdominal pain, diarrhœa	Admitted on 10th day; rash moderate; bowels constipated	16 days' fever; highest temp. 104°	50	„	—	—
17 G. S.	Sept.	M.	22	Headache, weakness, diarrhœa	Admitted in 3rd week; fatal attack; profuse diarrhœa, with much hæmorrhage, the day before his death; night delirium, and great prostration from the first admission. Death on 18th day	3 days' fever; 103·6°; sank after hæmorrhage to 101°, then rose before death to 103·4°	3	Death	Brandy, Potass. bromid. and chloral, Enema amyli c. opio	P.M.—Nearly 10 feet of the intestine showed the usual "typhoid" ulceration; there was no perforation nor peritonitis; general bronchitis was noticed; the spleen large, red, or granular; there was a quantity of red fluid blood in the intestine.
18 J. B.	Oct.	M.	—	Headache, abdominal pains, deafness, diarrhœa	Admitted on 10th day; delirious and tremulous; diarrhœa not excessive. Relapse on 29th day, lasting 13 days. Good recovery	11 days' fever; in first attack highest temp. 104·8°. 13 days' fever in relapse, and highest temp. 101·6°	56	Recov.	Brandy	—
19 S. C.	Nov.	M.	20	Abdominal pain, giddiness, epistaxis	Admitted in 3rd week; severe and prolonged attack; general bronchitis; copious rash; profuse diarrhœa; hæmorrhage in 5th week; great prostration and wasting; night delirium	34 days' fever; highest temp. 104°	77	„	Brandy, Pil. plumbi c. opio, Enemata amyli	Erysipelas faciei in 7th week; patient became very delirious and troublesome, but ultimately made good recovery.

January—March	9	July—September	4
April—June	4	October—December	2
Males	12	Recovery	16
Females	7	Deaths	3

TABLE C.—*Acute Rheumatism.*

In last year's Report a summary was presented of all the cases of acute rheumatism treated in the hospital during the years 1881-2-3, in special reference to age, sex, months, and seasons of the year, duration of attack, heart complications, and inheritance.

To these tables the cases treated during the year 1884 are added, and the number now reaches 323.

Ages.

	Under 5.	5—10.	10—20.	20—30.	30—40.	40—50.	50—60.	Over 60.
1881	0	2	31	22	23	5	1	0
1882	1	3	29	16	12	5	1	0
1883	0	1	18	28	14	8	2	1
1884	0	16	33	29	14	5	3	0
Total	1	22	111	95	63	23	7	1

Sex.

	Males.	Females.
1881	43	41
1882	25	42
1883	39	33
1884	46	54
Total	153	170

Numbers admitted in each month.

January	34	July	21
February	35	August	33
March	27	September	34
April	24	October	33
May	24	November	14
June	20	December	24

Seasons.

Cases admitted in each group of three months.

January—March	96	July—September	88
April—June	68	October—December	71

Cases admitted in two groups: six warmer and six colder months.

April—September	149	October—March	174

Duration.

Average stay in hospital—28·42 days.

Inheritance.

	Rheumatism.	Gout.	Neurosis.	Phthisis.
1881	26	7	8	11
1882	34	2	13	19
1883	32	6	9	9
1884	42	14	22	8
Total	134	29	47	47

Character.

Months.	No. of cases.	Average stay in days.	No. of cases with heart disease.	Character of heart disease.		No. of cases admitted with old heart disease.
				Peri-carditis.	Endo-carditis.	
January	34	34·41	22	8	20	2
February	35	31·02	26	13	18	5
March	27	31·14	14	7	13	3
April	24	31·58	16	2	15	3
May	24	31·29	12	7	8	1
June	20	28·9	10	2	9	1
July	21	26·33	14	5	11	4
August	33	21·39	18	8	13	4
September	34	26·02	16	5	12	2
October	33	29·9	19	6	15	5
November	14	28·5	10	7	5	2
December	24	19·04	11	4	8	2

The whole number of cases with heart affections is 188; of these, 74 suffered from pericarditis and 147 endocarditis. The number includes 34 cases with old heart disease, as shown by cardiac bruits, and 33 who had both pericarditis and endocarditis. Tho number leaving hospital with persistent bruits is 121.

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
1 E. T.	Jan.	4th	Father rheumatic fever	4	F.	26	15	3	4	100°	Elbows, knees, feet	Mitral regurgitant	?	Mitral regurgitant	18	Recovery	—	Barmaid; exposed to draughts. The heart impulse was felt in the 6th interspace outside the nipple, and did not alter with the movement of the patient. This condition had been noticed on her admission in 1881, and seemed to point to an adherent pericardium; there was some slight retraction of the intercostal space at the impulse.
2 C. B.	"	13th	Family healthy	0	M.	20	20	3	?	100°	Ankles, knees, elbows, and wrists	Aortic regurgitant, mitral regurgitant	Present	Both murmurs present	32	"	—	Beer drinker.
3 E. S.	"	5th	Insanity in father's family	1	F.	13	11	11	20	102·8°	Back, ankle, knees	Endocarditis	"	Soft systolic murmur at apex	32	"	Tinct. ferri perchloridi, sodæ sal. with good effect on pain during a relapse	The attack was preceded by a sprain of the ankle 7 days before. She suffered from an attack of tonsillitis during the rheumatism.
4 C. F.	"	7th	Family healthy	1	M.	23	19	3	2	101°	Shoulders, elbows, thighs, knees, feet	—	—	—	14	"	Sodæ sal. with good effect on pain and temp.	Beer drinker. Sprained knee 3 weeks before, and after this was exposed to cold.

5 W. R.	„	20th	Brother rheumatic fever	0	M.	30	30	23	?	101·6°	All joints of arms and legs	—	—	—	28	„	Sodæ sal. no effect on temp.	His health had been somewhat broken by fever in India.
6 G. D.	„	13th	—	0	M.	16	16	28	?	103·4°	General pains	Endocarditis, pericarditis	Present	Double aortic	54	„	—	Patient had pneumonia of both lower lobes. The attack of rheumatism was preceded by tonsillitis. The urine was albuminous.
7 M. S.	„	6th	Mother insane	0	F.	26	26	1	7	98·8°	All large joints	—	—	—	18	„	—	Patient has been weakened by long suckling, and her work exposed her to cold.
8 E. P.	„	8th	Father died of phthisis, one brother phthisical	0	F.	20	20	41	41	103·4°	Back, right wrist, fingers, knees	Endocarditis	Present	Soft murmur at apex	41	No relief	Blisters, alkalies, sodæ sal., all without effect	Patient was at last transferred to surgical wards suffering from suppuration of right knee-joint and right wrist.
9 G. L.	„	5th	Family healthy	0	M.	33	33	9	15	101·8°	General pains, no joint effusion	„	„	Double aortic	82	Recovery	—	Tonsillitis during attack. Policeman.
10 R. P.	„	21st	Father and brother rheumatic	0	F.	19	19	20	28	102·8°	Knees, elbows	„	„	„	48	„	Blisters, alkalies	Pleurisy and pneumonia.
11 T. W.	Feb.	4th	Family healthy	0	M.	29	29	3	3	101°	Ankles	—	—	—	6	„	Sodæ sal. with relief of pain and reduction of temp.	Policeman.
12 R. B.	„	22nd	Brother died of phthisis	2	F.	27	13	9	24	102°	Shoulders, hips, and knees	Endocarditis	Present	Aortic systolic	40	„	Sodæ sal. with reduction of temp.; not much effect on fever	—

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
13 H. P.	Feb.	5th	Family healthy	0	M.	49	49	4	14	102°	Hips, knees, ankles, left hand, right wrist	Pericarditis	Present	Heart-sounds clear	18	Recovery	Sodæ sal.	Attack probably due to damp house. Five previous attacks of gout, but never rheumatism before. Gasfitter by trade.
14 G. O.	„	8th	—	1	M.	14	13	5	6	100°	Joints of left leg and arm	Endocarditis	?	Mitral regurgitation	40	„	„	Attack due to exposure to wet.
15 H. W.	Feb.	2nd	Mother rheumatic fever, brother rheumatic fever, father's mother rheumatic fever	2	M.	23	17	9	6	103°	Back, shoulders	Pericarditis	Present	Heart-sounds clear	15	„	Alkalies at first, salicylate of soda in relapse, with relief	Patient was suffering great privations when attacked by rheumatism.
16 R. D.	„	4th	Father rheumatic fever	0	F.	17	17	18	18	103°	Ankles, right knee, left elbow	„	„	Systolic bruit over left base, probably "hæmic"	31	„	Salic. of soda with relief of pain, not much effect on temp., tinct. F. perchlor. during convalescence	—
17 E. M.	„	?	Father rheuma-	1	F.	52	44	3	8	101°	All large joints	—	—	—	23	„	Sodæ sal. reduced	Patient was living in a district in Shropshire

			tic, died paralysed, father's mother insane														temp., little effect on pain, Pulv. Doveri	where rheumatism was common, when first attacked.
18 E. R.	„	15th	Father rheumatic fever, brother and sister rheumatic, mother rheumatic, died in a "fit"	0	F.	26	26	9	11	104·4°	Hands, shoulders, feet	Endocarditis	Present	Mitral regurgitant	23	„	—	Pneumonia of right lobe, urine albuminous.
19 E. G.	„	2nd	—	0	F.	5	5	2	6	102·6°	Knees, elbows, hands	Pericarditis	„	Heart-sounds clear	47	„	Sodæ sal. with good result	Chorea of right side, during convalescence.
20 E. S.	„	3rd	Father's brother insane	2	F.	13	11	—	?	103·4°	Left hand, wrist, elbow, neck	Pericarditis, endocarditis	Present ?	Mitral regurgitant	86	„	Salicylate of soda, alkalies	Patient admitted with chorea; the rheumatism came on the second day. She lapsed into a curious condition of amentia, apparently unconscious of surroundings, though she could at times be roused; she passed all evacuations involuntarily. After she had been in this state for a week, one night she had a violent attack of general convulsions, lasting ½ hour. Next morning she fell into the apathetic state again. She had a second attack of convulsions the next evening. After this, pericarditis, and pneumonia of left upper lobe attacked her. She made a good recovery.
21 T. W.	„	3rd	Family healthy	1	M.	29	29	2	4	104·4°	Right elbow, neck, and legs	Endocarditis	Present	Mitral systolic	13	„	Sodæ sal.	An attack of tonsillitis preceded the rheumatism.
22 M. L. H.	„	?	„	0	F.	36	36	2	3	100·6°	Wrists, left knee	—	—	—	38	„	Alkalies	Urine albuminous.

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
23 L. I.	Feb.	14th	Family healthy	1	F.	25	20	3	4	100·6°	Wrists, hands, right hip, and knee	—	—	—	18	Recovery	Sodæ sal.	Cause due to exposure and overwork.
24 G. A.	„	3rd	„	0	M.	18	18	4	4	103·2°	Neck and back	—	—	—	8	„	—	Patient was recovering from pneumonia when admitted.
25 W. H.	Mar.	7th	Father rheumatic fever, mother rheumatic	0	M.	16	16	3	6	101·2°	All large joints	—	—	—	20	„	Alkalies and sal. of soda	—
26 J. H.	„	7th	Sister died of phthisis	1	F.	45	33	33	30	102°	Right hand, knees	—	—	—	46	„	Sal. of soda, Pulv. Doveri	Cause due to exposure.
27 E. W.	„	12th	Son rheumatic fever	0	F.	34	34	2	2	101·8°	Hands and back	—	—	—	4	„	Sal. of soda	Exposed to changes in temperature. Occupation washerwoman.
28 E. C.	„	14th	Father died of brain disease	0	F.	10	10	19	19	103°	Right knee, hands, elbows	Endocarditis, pericarditis	Present	—	20	Death	Sal. of soda	Patient suffered from pneumonia of both lower lobes. She died suddenly.
29 E. E. C.	„	6th	Family healthy	0	F.	11	11	11	3	103°	Ankles, wrists, shoulders	Endocarditis	„	Aortic regurgitant, mitral systolic	85	Recovery	„	Pneumonia of right lower lobe.

30 A. J.	„	5th	Sister died of phthisis	1	F.	19	16	2	2	100·4°	Ankles, knees	—	—	—	13	„	„	—
31 H. C.	April	8th	Family healthy	0	M.	49	49	14	14	103·6°	Hands and legs	—	—	—	57	„	Hot baths, alkalies	Pneumonia of right lower lobe.
32 E. G.	„	6th	—	1	F.	5	5	3	8	101·6°	Legs and wrists	Pericarditis	Present	—	8	Death	—	This case is interesting in the fact that patient was in the hospital before with acute rheumatism, during which pericarditis was developed. Thus this was the second attack of pericarditis. She also suffered pneumonia of right upper lobe.
33 G. B.	„	6th	Father and father's brother rheumatic fever	1	M.	11	9	3	3	101°	Ankles, knees, wrists, and shoulders	Endocarditis	Present	Systolic apex murmur	10	Recovery	Sodæ sal. alkalies	—
34 J. C.	„	14th	Father suffered from rheumatism, and is now insane, brother rheumatic fever	1	M.	16	15	2	2	100·4°	Ankles, knees	„	?	Mitral regurgitant	9	„	Alkalies	—
35 L. M.	„	10th	Mother rheumatic fever, 1 brother insane	1	F.	17	14	10	9	101°	Right wrist, ankle, shoulders, knees	—	—	—	20	„	Aqua menth. pip.	First attack followed scarlet fever.
36 V. R.	„	9th	Uncle died of phthisis	0	F.	14	14	4	4	101·2°	Wrists, feet, knees	Endocarditis	Present	Aortic regurgitant, mitral regurgitant	25	„	Tinct. F. perchlor.	—

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
37 C. W.	April	5th	—	0	F.	7	7	30	?	103°	All joints	Pericarditis, endocarditis	Present	Aortic regurg., mitral regurg.	68	Recovery	—	Patient suffered pneumonia of both lower lobes.
38 J. B.	"	?	Family healthy	6	M.	33	14	3	3	103°	Ankles, knees, hips	—	—	—	12	"	Sal. of soda	—
39 H. O.	May	8th	"	3	M.	44	28	1	3	101°	Ankles, knees, wrists	—	—	—	12	"	"	Urine albuminous.
40 K. M.	"	6th	Father rheumatic fever, mother rheumatism	0	F.	20	20	11	10	102·4°	Ankles, knees, hips	—	—	—	30	"	"	"
41 E. C.	"	5th	Father rheumatism	0	F.	16	16	13	14	104·6°	Feet, ankles, wrists, elbows	Pericarditis	Present	Heart-sounds clear	50	"	Sal. of soda both in first attack and in relapse with good effect	Patient had relapse after an interval of 6 days' relief. Relapse lasted 6 days.
42 M. K.	"	4th	Family healthy	0	F.	14	14	2	3	99·8°	Wrists, ankles, knees	—	—	—	15	"	Sal. of soda	—
43 T. M.	"	4th	"	2	F.	22	11	23	21	103°	Ankles, knees, left	—	—	—	71	"	"	Relapse on 36th day for 3 days.

											shoulder, left wrist							
44 A. W.	June	4th	„	1	M.	20	13	3	3	102°	Right shoulder, elbow, ankles, knees	—	—	—	38	„	„	Cause, exposure.
45 J. W.	„	20th	Brother gout	0	M.	24	24	3	3	100°	Shoulders, ankles, right knee, and hip	—	—	—	10	„	„	Attack said to be due to sleeping in damp bed.
46 E. M.	„	21st	Father rheumatism and gout, mother rheumatism	1	F.	17	17	0	10	98·4°	Hips, knees, ankles, and back	Endocarditis	?	Mitral regurgitant	30	„	—	Typical case of acute rheumatism, with redness, swelling, tenderness, and pain of joints and affection of the heart, but no raised temperature throughout.
47 S. N.	„	8th	Father and brother died of phthisis	0	F.	20	20	0	10	99°	Knees, shoulders	—	—	—	25	„	Sal. of soda	Similar case to the last in that the joints were typically affected, but there was no fever. Patient had chorea when a child.
48 M. F.	„	6th	—	0	F.	9	9	5	6	102·8°	All joints	Endocarditis	Present	Mitral regurgitant	34	„	„	—
49 S. L.	„	14th	Mother rheumatism	0	M.	26	26	12	6	102·8°	Ankles, knees	—	—	—	33	„	—	Tonsillitis preceded rheumatism.
50 W. E. B.	„	3rd	Sister rheumatic fever, mother rheumatic fever,	0	M.	11	11	2	2	100°	Left elbow and ankle	—	—	—	2	Death	Alkalies	Peliosis rheumatica. Patient died collapsed.

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
51 M. F.	June	7th	Mother died of phthisis	0	F.	19	19	11	6	101·8°	Feet, ankles, knees	—	—	—	60	Recovery	—	—
52 H. J. S.	July	22nd	Father rheumatic fever	2	M.	28	19	10	9	101·8°	Feet, ankles, wrists, hands	Endocarditis	?	Aortic, obstructive, and regurgitant; mitral regurgitant	20	„	Salicin	First attack due to long exposure after shipwreck.
53 C. B.	„	14th	Father rheumatism and gout, sister epileptic	1	F.	23	22	20	20	102°	Hips, knees, ankles, fingers	„	Present	Mitral systolic	32	„	Salicin, sal. of soda, blisters	—
54 A. M.	„	?	Gout in father's family, mother rheumatism	2	F.	25	23	—	15	89·6°	Ankles, knees, hands	„	„	Mitral regurgitant	25	„	Alkalies	Patient a barmaid. Attack preceded by tonsillitis.
55 L. F.	„	4th	Mother's father acute rheumatism and gout	1	M.	13	13	32	20	101°	Back, thigh, knees, hands, and elbows	Pericarditis	„	Heart-sounds clear	70	„	Salicin	Patient developed chorea about one week after admission with rheumatism.
56	„	7th	Family	0	F.	33	33	5	10	100·2°	Knees,	Endo-	„	Mitral	24	„	Alkalies	—

M. A. G.			healthy								ankles, wrists, elbows	carditis		systolic				
57 W. H.	„	5th	Father rheumatic fever, mother's father gout	2	M.	21	12	3	8	101·2°	Thighs, knees, ankles, toes	Pericarditis	„	Heart-sounds clear	30	„	Salicin	—
58 E. T.	„	8th	Father and mother rheumatic fever; insanity in father's family	1	M.	44	29	2	2	100·8°	Knees, wrists, hands	—	—	—	8	„	Sal. of soda	—
59 G. B.	July	8th	Father rheumatic fever	1	M.	11	9	14	14	103°	Legs, knees, ankles, elbows, wrists	Pericarditis, endocarditis	„	Mitral systolic	23	„	„	—
60 L. K.	Aug.	—	—	—	—	30	30	1	1	101°	Large joints	—	—	—	1	No relief	„	Patient went out at own wish before the rheumatism was relieved.
61 W. J. D.	„	20th	Father rheumatic fever, sister rheumatic fever and chorea	0	M.	16	16	2	2	102·8°	Thighs, knees, ankles	Pericarditis	Present	Heart-sounds clear	15	Recovery	Alkalies, sodæ sal.	The patient's sister developed chorea during convalescence from acute rheumatism.
62 W. T.	„	4th	Family healthy	0	M.	29	29	?	?	102°	Wrists, knees	—	—	—	31	„	Sal. of soda	Patient suffered from gout before, but not rheumatism.
63 M. M.	„	14th	Insanity and cancer in mother's family	0	F.	34	34	?	?	102°	All large joints	—	—	—	25	„	„	—

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
64 E. H.	Aug.	14th	Family healthy	0	F.	52	52	3	3	102°	Shoulders, knees	—	—	—	14	Recovery	Sal. of soda	Patient had gout 18 years before.
65 J. F.	"	?	"	0	F.	19	19	3	3	100°	Large joints	Endocarditis	Present	Mitral, obstructive & regurgitant	20	"	Alkalies	Attack preceded by tonsillitis.
66 J. M.	"	17th	"	9	F.	17	17	18	18	102·8°	Feet, knees, wrists, elbows	"	?	Mitral regurgitant	40	"	Sal. of soda	"
67 M. P.	"	4th	Gout in father's family	0	M.	17	17	3	3	102°	Knees, ankles, shoulders	—	—	—	8	"	Sodæ sal.	Exposure.
68 W. C.	"	4th	"	0	M.	24	24	10	10	102·2°	Hips, knees, ankles	—	—	—	30	"	Sodæ sal., pulv. ipecac. co.	—
69 S. G.	"	8th	Family healthy	0	M.	18	18	14	14	100·8°	Legs, thighs, knees, ankles	—	—	—	25	"	Sodæ sal.	—
70 L. M.	"	14th	Gout in father's family, phthisis in mother's family, sister epileptic	1	F.	46	32	27	27	101·6°	All large joints	—	—	—	34	"	—	—

71 M. W.	„	14th	Father rheumatic fever, mother rheumatic fever, brother epileptic	0	F.	37	37	14	14	102·4°	Ankles, knees, hips, shoulders	—	—	—	30	„	Sodæ sal.	—
72 H. D.	Sept.	14th	Sister died of phthisis	0	F.	17	17	4	14	99·6°	Shoulders, elbows, ankles, back	Pericarditis	Present	Heart-sounds clear	30	„	Alkalies	Preceded by tonsillitis.
73 W. B.	„	3rd	Father rheumatism	0	M.	15	15	6	6	101·4°	Ankles, knees, thighs, back	—	—	—	29	„	Sodæ sal.	—
74 C. T.	„	14th	Family healthy	1	M.	25	25	36	36	101°	Ankles, knees, wrists, hips	Endocarditis	?	Mitral regurgitant	51	„	„	—
75 E. A.	„	4th	Family history unknown	1	M.	32	30	15	16	102·4°	Ankles, knees, hips, shoulders	—	—	—	36	„	„	Patient was confined in an asylum for seven years from the age of 16.
76 C. E.	„	10th	Sister insane, phthisis in mother's family	0	F.	22	22	5	5	102°	Knees, shoulders	Endocarditis	Present	Mitral regurgitant	14	„	Alkalies	—
77 C. M.	„	?	Father gouty	2	F.	40	12	3	4	100·8°	Back, knees, hips, elbows	—	—	—	10	„	„	The second attack of acute rheumatism came on during convalescence from an illness called "*brain fever.*" This was said to be due to a sudden and severe mental shock.

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
78 D. M.	Sept.	5th	—	1	M.	33	25	2	3	101°	Ankles, feet, elbows, wrists	—	—	—	9	Recovery	Alkalies	—
79 G. W.	„	20th	Father's two brothers rheumatic fever	0	F.	11	11	1	3	99·6°	Hips, legs, ankles	Endocarditis (mitral systolic)	Present	Heart-sounds clear	15	„	—	—
80 M. P.	Sept.	3rd	Family healthy	5	F.	47	37	7	7	101°	Ankles, elbows, arms	—	—	—	25	„	Sal. of soda	—
81 J. W.	„	7th	Sister rheumatic fever, father's family phthisis	2	M.	37	12	16	16	105°	Feet, knees, elbows, wrists, shoulders	—	—	—	55	„	„	Urine albuminous.
82 S. P.	„	3rd	Mother's sister and niece rheumatic fever	2	F.	33	18	8	9	101·8°	All large joints	—	—	—	23	„	Alkalies	Patient a deaf-mute.
83 M. A.	„	5th	Mother rheumatic fever	1	F.	26	11	21	21	103°	„	Pericarditis	Present	Heart-sounds clear	45	„	Salicin, sodæ sal.	—
84 H. H.	Oct.	7th	Father gout, mother rheuma-	3	F.	32	25	50	50	103·2°	Knees, ankles, left wrist,	Endocarditis	?	Systolic apex bruit	71	„	Sodæ sal.	Urine albuminous.

				tic fever, brother insane								elbow, shoulder						
85 A. L.	„	?	Gout in father's family	1	F.	8	?	4	4	101·8°	Knees	„	?	Mitral regurgitant	15	„	—	Patient had acute rheumatism followed by chorea when child.
86 W. R.	„	3rd	Father rheumatism, father's father rheumatic fever, and died insane	1	M.	16	15	4	4	101·2°	Feet, legs, hands, ankles	Systolic apex bruit	—	Heart-sounds clear	18	„	Sal. of soda	Patient became choreic during convalescence; the chorea began in the left hand.
87 J. W.	„	4th	Rheumatism in both father's and mother's family, mother's brother insane	2	F.	7	5	2	3	102·2°	Ankles, knees	Endocarditis	?	Mitral regurgitant	16	„	Sodæ sal.	—
88 J. M.	„	8th	Family history good	1	M.	25	21	7	7	101·6°	All large joints	—	—	—	21	„	Alkalies	—
89 M. S.	„	14th	Mother acute rheumatism and gout	3	F.	54	14	14	14	103°	Right ankle, hip, both knees	Endocarditis	?	Mitral regurgitant	25	„	Salicin, potassii iodidum	—
90 W. H. M.	„	3rd	Gout in mother's family	2	M.	20	13	18	18	103·4°	Right knee and elbow, both ankles	„	?	„	44	„	Salicin	—

TABLE C—*continued.*

No. and name.	Month admitted.	Day of illness admitted.	Family history.	Previous attacks.	Sex.	Age.	Age when first attack occurred.	Days of fever in hospital.	Days of pain in hospital.	Highest temp.	Joints, &c., affected.	Heart. Affection.	Heart. In which attack developed.	Heart. State on discharge.	Days in hosp.	Result.	Treatment.	Remarks.
91 E. L.	Nov.	4th	Family healthy	1	F.	59	23	20	20	102°	Wrist and shoulder	Pericarditis	Present	Heart-sounds clear	42	Recovery	Sodæ sal., quiniæ sulphas	—
92 G. D.	"	—	Sister rheumatic fever, insanity in father's family	0	M.	17	17	13	10	103·4°	Ankles, knees, elbows	Pericarditis, endocarditis	"	Mitral regurgitant	30	"	Sodæ sal.	—
93 E. A.	Nov.	—	Sister rheumatic fever	0	F.	30	30	?	?	99·6°	Knees, shoulder	Pericarditis	Present	Heart-sounds clear	42	"	Pulv. ipec. co., guaiacum	—
94 M. J.	"	8th	Family healthy	1	F.	24	20	7	7	102·4°	Knees, hands	Endocarditis	"	Mitral regurgitant	18	"	Sal. of soda	—
95 E. W.	Dec.	8th	Sister rheumatic fever	1	F.	30	26	10	12	101·4°	Knees, hips, elbows, wrists	Pericarditis	"	Heart-sounds clear	32	"	Sodæ sal.	Patient had been confined six weeks before with rheumatism.
96 S. A.	"	15th	Mother epileptic, sister rheumatic fever	1	F.	19	18	11	11	99·6°	Elbows, knees	Endocarditis	?	Mitral regurgitant	34	"	"	—

97 S. H.	„	15th	Father rheumatic fever	0	M.	26	26	9	9	102·2°	Feet, ankles, knees, hips	—	—	—	16	„	„	—
98 J. R.	„	10th	Father and sister rheumatic	0	M.	35	35	18	18	101°	Knees, ankles, left wrist	—	—	—	31	„	Alkalies	—
99 J. W.	„	—	Cousin chorea	2	F.	19	11	4	4	100·6°	Hips, knees, elbows	Endocarditis	?	Double aortic, double mitral	30	„	Sodæ sal.	Attack preceded by tonsillitis.
100 W. P.	Oct.	5th	Brother rheumatic fever, uncle epileptic (maternal)	1	M.	30	26	6	6	102·6°	Knees, ankles, wrists	—	—	—	32	„	Salicin	—

January—March	30	July—September	32
April—June	21	October—December	17
Males	46	Recoveries	97
Females	54	Deaths	3

Table D.—*Chorea.*

Eighty-seven cases of chorea have been treated in the hospital during the years 1881-2-3-4. A short summary of these cases is prefixed to the analysis of the cases of the year 1884.

Inheritance.

Rheumatism	29
Neurosis	32
Phthisis	8
Gout	4

Sex.

	Males.		Females.
1881	6	...	14
1882	4	...	18
1883	3	...	14
1884	11	...	17
Total	24	...	63

Ages.

	Under 5.	5—10.	10—20.	20—30.	30—40.	40—50.	50—60.
1881	0	4	17	1	0	0	0
1882	0	4	13	2	1	0	0
1883	1	4	10	2	0	0	0
1884	0	8	17	2	0	0	1
	1	20	57	7	1	0	1

Rheumatism.—In 22 cases a history of acute rheumatism was related. The connection of the acute rheumatism to the chorea was as follows :—In 7 cases the rheumatism was suggested as the cause ; in 6 cases the attack of rheumatism was developed during the course of the chorea ; in the remaining 9 cases there was a distinct interval of *good health* between the rheumatism and chorea, viz. 6 years, 5 years, 4 years, 3 years, 1 year (2), 6 months, 3 months, 1 month.

Cause.—The causes given by the parents or friends were—fright, sorrow, or other mental trouble in 55 cases of the whole.

Heart.—In 14 cases there was heard a mitral systolic murmur, constant in force and rhythm ; out of these 14 cases 5 had suffered acute rheumatism. In 42 cases a murmur was heard over the apex occasionally only, and the murmur was also variable in time and intensity, and had quite disappeared at the discharge of the patient.

TABLE D—*continued.*

No. and name.	Family history.	Previous illness, with special reference to rheumatism.	Previous chorea.	Sex.	Age.	Heart condition.	Part of body affected.	Cause.	Result.	Days in hosp.	Remarks.
1 J. M.	Family healthy	Acute rheumatism, whooping-cough	0	M.	10	Irregular action, systolic bruit at apex occasionally	General movements	Fright at seeing a girl burnt	Recov.	37	The acute rheumatism affected patient one month before the chorea began.
2 L. B.	Sister chorea and rheumatic fever	Whooping-cough and measles	0	F.	12	Systolic bruit at apex	Hands and arms, more marked on left side	Fright at a house on fire opposite her own home	"	44	The chorea began in general "fidgitiness" a few days after the fright.
3 W. H. D.	Mother had chorea when a child	Acute rheumatism	0	M.	14	Irregular action, occasional bruit at apex	Right hemichorea	Imitation of a child neighbour with chorea (?)	"	58	The acute rheumatism affected patient 3 months before the chorea. He had been ill 3 weeks, but completely recovered, with the exception of slight weakness.
4 E. G.	—	"	0	F.	5	Mitral regurgitant	Right side	—	"	47	The chorea began in hospital during convalescence from acute rheumatism. The movements were on the same side as that affected by rheumatism.
5 E. S.	Father's brother insane; father himself very irritable and strange at times	Acute rheumatism, tonsillitis	?	F.	13	"	Of hands and arm	—	"	86	The patient was attacked by rheumatism on the same side as the chorea, about 2 days from the beginning of the chorea. She then fell into a curious state of apparent amentia, from which she could hardly be roused. During this apathy she had several convulsive attacks, and after return to a more intelligent state the chorea reappeared, this time on the right side. Her mother stated that some years before the patient had been terribly frightened at a suicide, and something of the nature of chorea then affected her, and her mental faculties had been of a low order since.

TABLE D—*continued.*

No. and name.	Family history.	Previous illness, with special reference to rheumatism.	Previous chorea.	Sex.	Age.	Heart condition.	Part of body affected.	Cause.	Result.	Days in hosp.	Remarks
6 T. M.	Healthy family	Good health	0	M.	54	Inconstant bruit at apex	General movements of limbs and body, head and face	Grief at the death of his wife	Relief	60	The chorea had lasted about 4 years. He was distinctly better on discharge from hospital.
7 L. B.	Mother's cousin corea	—	0	F.	11	Loud systolic bruit at apex	Right hand, arm, leg, face, tongue	Fright at a man suddenly appearing in the dark while she was in charge of a baby	Recov.	43	The heart bruit entirely disappeared.
8 F. O.	Healthy	—	0	F.	11	Occasional bruit at apex	General	Excitement about an examination at school	,,	33	Tonsillitis during chorea, after which movements soon ceased.
9 C. S.	—	—	—	F.	25	Double mitral	Hands and legs	—	,,	20	The patient had been in hospital in 1883 with tremors of the hands and arms, and fits of hystero-epileptic character, and on these succeeded an outburst of apparent acute mania.
10 C. H.	Healthy	—	1	F.	10	Irregular action	General	—	,,	58	Chorea disappeared on the patient being attacked by erysipelas faciei.
11 L. F.	Rheumatism in mother's family	Acute rheumatism	0	M.	13	—	Legs	—	,,	70	The chorea came on during convalescence from acute rheumatism.
12 A. S.	Healthy	Whooping-cough	1	F.	8	Heart-sounds clear	General	The first attack was from fright at being beaten by mistress at school	,,	24	Tonsillitis during chorea.
13 W. L.	Father rheum. fever, mother's brother insane	—	1	M.	16	Occasional bruit at apex	,,	—	,,	30	Patient had been much weakened by long illness of "blood-poisoning," probably diphtheria.

14 A. G.	Father rheumatic fever and delirium tremens	—	0	F.	20	—	"	Fright at being left all night in railway carriage on siding with a number of strangers	Death	4	After patient had been in hospital a few hours she became very violent and troublesome, and was removed to a separate ward. During the next 2 days she was very excited and violent, but became quieter for a time. She then had a second and more violent attack. She died rather suddenly 3 hours after.
15 A. B.	Father rheumatic fever, father's sister rheum. fever	Whooping-cough	2	F.	9	Double mitral	"	Fright at man suddenly jumping from behind a hedge	Recov.	13	The first attack had also been caused by fright.
16 E. H.	Mother rheumatic fever, mother's father epileptic, died insane	"	0	F.	9	Occasional systolic bruit at apex	Left side	—	"	14	Patient weak from poor living.
17 E. M.	Father's sister chorea	Acute rheumatism, whooping-cough	3	F.	14	First sound occasionally doubled	General	Fright at seeing drunken father thrash her mother	"	71	The first attack of chorea followed an attack of acute rheumatism.
18 C. M.	—	—	0	F.	19	Irregular action	Head, face, limbs	—	"	28	The choreic movements came on after a hysterical fit.
19 M. M.	Father rheumatic fever, mother's brother epileptic	—	1	F.	18	Irregular action, occasional systolic murmur at apex	Both sides, most marked on left	A series of frights: 1st, from a box falling on her head; 2nd, from seeing girl in fit; 3rd, from narrowly escaping being run down by a cab	"	20	Patient began to improve, and was allowed to go home; but on her arrival received bad news of her brother, and the chorea returned.
20 E. M.	Father insane, mother's two sisters rheumatic fever	—	0	F.	7	Irregular action	Mouth, tongue, hands	—	"	10	—
21 A. H.	—	—	0	M.	13	Action regular	General	Fright at being upset from cart	"	56	—

TABLE D—*continued.*

No. and name.	Family history.	Previous illness, with special reference to rheumatism.	Previous chorea.	Sex.	Age.	Heart condition.	Part of body affected	Cause.	Result.	Days in hosp.	Remarks.
22 S. T. J.	Mother's father died paralysed	—	0	M.	7	Systolic bruit at apex	Hands, mouth, tongue	Thrashing at school frightened the boy	Death	30	The child died of chronic hydrocephalus.
23 C. B.	Mother's father died insane	—	1	M.	12	Constant systolic bruit at apex	General	Fright at scolding	Recov.	18	The previous attack said to be due to punishment at school for failure in arithmetic.
24 W. R.	Father rheumatism, his father died insane, also suffered from rheumatism	Acute rheumatism	0	M.	16	Systolic bruit at apex	Left hand and arm	—	"	18	Chorea came on during convalescence from acute rheumatism.
25 E. M.	Father rheumatic fever	Shingles	1	F.	17	Action regular, sounds clear	Hands, arms, face, tongue	? Pregnancy, unmarried girl	"	58	First attack due to fright at being placed in dark room for a punishment.
26 H. L. R.	Mother's brother rheumatic fever and chorea	—	0	M.	7	Action irregular, occasional bruit	General	Fright at fall in street	"	43	—
27 S. W.	Father's sister insane, also grandfather	—	0	M.	8	Systolic bruit at apex	"	Hard work at school	"	33	—
28 J. T.	Family healthy	—	0	F.	18	—	Left hand, arm, lips, tongue, diaphragm	Fright at fall downstairs of a woman; she thought it was her mother	"	42	Patient was pregnant about 3 months, unmarried.

TABLE E.—*List of Deaths in the Medical Wards.*

	Males.		Females.
GENERAL DISEASES:			
Erysipelas	0	...	1
Enteric	3	...	0
Rheumatism (acute)	1	...	2
Tuberculosis	6	...	5
Anæmia	0	...	1
Diabetes	0	...	1
NERVOUS SYSTEM:			
Meningitis	0	...	2
Hæmorrhage into brain	4	...	1
Softening of brain	0	...	1
Tabes dorsalis	0	...	1
Delirium tremens	1	...	0
CIRCULATORY SYSTEM:			
Heart:			
Dilated	2	...	0
Pericarditis	1	...	0
Mitral	1	...	3
Aortic	7	...	2
Tricuspid	0	...	2
Aneurism	2	...	1
RESPIRATORY SYSTEM:			
Acute bronchitis	1	...	3
Chronic bronchitis	0	...	1
Pneumonia, lobar	6	...	2
„ lobular	0	...	5
Phthisis	13	...	9
Malignant disease of lung	0	...	1
DIGESTIVE SYSTEM:			
Cancer of œsophagus	0	...	2
„ stomach	7	...	2
Ulceration of vermiform appendix	1	...	0
Intussusception	0	...	1
Cirrhosis of liver	2	...	1
Cancer	0	...	1
URINARY SYSTEM:			
Acute nephritis	0	...	1
Large, white, and fatty	1	...	1
Contracted granular	3	...	1
Total	72	...	56

SURGICAL REGISTRAR'S REPORT

FOR THE

YEAR ENDING DECEMBER 31ST, 1884.

BY WALTER ARTHUR,
SURGICAL REGISTRAR.

THE total number of cases under treatment in the surgical wards during the past year was 985.

	Males.	Females.	Total.
Remaining in hospital December 31st, 1883	51	26	77
Admitted during the year 1884			908
			985

Of these there were:

Discharged, cured or relieved	509	315	824
" unrelieved	13	8	21
" for special reasons	3	5	8
Transferred to the medical wards	4	5	9
Died	29	19	48
In hospital December 31st, 1884	42	33	75
			985

The mortality during the year was 4·87 per cent.

TABLE I.—*Showing the total number of Cases of each Disease or Injury which were Discharged or Died during the year* 1884.

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
Smallpox	1	...	1	...	...	...	...
Erysipelas:							
i. Admitted:							
a. Cutaneous	2	1	1	...	...	...	...
b. Cellulo-cutaneous	3	1	1	1	...	...	...
ii. Arising in hospital:							
a. Cutaneous	2	1	1	...	...	...	...
b. Cellulo-cutaneous	1	...	...	...	1	...	...
Septicæmia	1	...	...	...	1	...	...
Pyæmia	1	...	...	1	...	...	...
Purpura	1	...	1	...	...	...	...
Uræmia	1	...	...	...	...	1	...
Rickets	4	1	3	...	...	...	...
General tuberculosis	1	...	...	1	...	...	...
RHEUMATISM:				...	...	...	...
a. Acute	1	...	1	...	...	...	...
b. Articular	3	1	2	...	...	...	...
c. Muscular	2	1	1	...	...	...	...
d. Gonorrhœal	2	1	1	...	...	...	...
e. Chronic rheumatic arthritis	2	1	1				
SYPHILIS:							
Chancre of eyelid	1	...	1	...	...	...	...
" vulva	1	...	1	...	...	...	...
Ulcers	5	1	3	...	...	...	1
Gummata	3	1	1	...	...	...	1
Condylomata	2	...	2	...	...	...	...
Keratitis	3	3	...	..	...	...	...
Iritis	1	1	...	...	...	...	...
Maculæ	1	...	1	...	...	...	...
Papulæ	3	...	2	...	...	...	1
Squamæ	2	...	2	...	...	...	...
Rupia	4	4	...	...	...	...	...
Stricture of rectum	1	...	1	...	...	...	...
TUMOURS:							
Hard carcinoma:							
i. Primary:							
Breast	13	...	9	...	3	...	1
Rectum	2	...	1	...	1	...	...
ii. Secondary:							
Breast	2	...	2	...	...	...	...
Epithelioma:							
Lip	1	1	...	...	...	...	...
Tongue	4	2	1	1	...	...	...
Larynx	2	...	...	...	...	1	...
Sub-maxillary glands	3	2	...	1	...	...	...
Sarcoma:							
Abdomen	2	1	1	...	...	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec.,'84	
		M.	F.	M.	F.	M.	F.
TUMOURS—*continued.*							
Sarcoma (cystic):							
Breast	2	...	2	...	...	...	...
Fibroma:							
Breast	1	...	1	...	...	...	...
Adenoma:							
Breast	1	...	1	...	...	...	...
Lipoma:							
Shoulder	1	...	1	...	...	...	...
Hip	1	...	1	...	...	...	...
Knee	1	...	1	...	...	...	...
Papilloma:							
Chin	1	1	...	...	...	...	...
Thigh	1	...	1	...	...	...	...
Molluscum:							
Eyelid	2	...	2	...	...	...	...
Nævoid tumour:							
Cheek	1	...	1	...	...	...	...
Cysts:							
i. Simple:							
Orbit	1	...	1	...	...	...	...
Neck	1	1	...	...	...	...	...
Chest wall	2	2	...	...	...	...	...
ii. Sebaceous:							
Scalp	1	1	...	...	...	...	...
Nose	1	1	...	...	...	...	...
Lower jaw	1	...	1	...	...	...	...
Shoulder	1	...	1	...	...	...	...
iii. Ovarian	4	...	2	...	2	...	...
MALFORMATIONS:							
Harelip and cleft palate	4	3	1	...	...	...	...
Cleft palate	2	1	1	...	...	...	...
Spina bifida	1	...	...	...	1	...	...
Imperforate anus	1	...	...	1	...	...	...
DEFORMITIES:							
Genu valgum	4	1	3	...	...	...	...
Talipes varus	10	7	2	...	...	...	1
„ equino-varus	1	1	...	...	...	...	...
„ planus	2	1	1	...	...	...	...
Supernumerary toes	1	...	1	...	...	...	...
RESULT OF INJURY:							
Cicatrix of arm (wound)	1	1	...	...	...	...	...
Old amputation of thigh	1	1	...	...	...	...	...
„ leg	1	...	1	...	...	...	...
Old excision of tibia	4	1	3	...	...	...	...
DISEASES OF THE NERVOUS SYSTEM:							
Cerebral hæmorrhage	2	...	...	1	1	...	...
Meningitis (tubercular)	1	...	...	...	1	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
DISEASES OF THE NERVOUS SYSTEM—*continued.*							
Paraplegia	1	1	...	...	...	...	...
„ (traumatic)	1	1	...	...	...	...	...
Paralysis of bladder and rectum	2	1	1	...	...	...	...
„ leg	1	1	...	...	...	...	...
Infantile paralysis	1	...	1	...	..	...	...
Sciatica	2	2	...	...	...	...	...
Hysteria	3	...	3	...	...	...	...
Epilepsy	1	1	...	...	...	...	...
DISEASES OF THE EYE:							
Conjunctivitis	1	...	1	...	...	...	...
Keratitis (strumous)	9	3	6	...	...	...	...
„ (syphilitic)	3	3	...	...	...	...	...
Opacity of cornea	3	2	1	...	...	...	...
Ulcer of cornea	3	2	1	...	...	...	...
Staphyloma of cornea	1	1	...	...	...	...	...
Iritis	5	4	1	...	...	...	..
Synechia (anterior)	1	1	...	...	...	...	...
„ (posterior)	3	3	...	...	...	...	...
Cataract	2	2	...	...	...	...	...
„ (traumatic)	2	2	...	...	...	...	...
Dislocated lens	1	1	...	...	...	...	...
Hyperæmia of disc	1	...	1	...	...	...	...
Optic neuritis	2	2	...	...	...	...	...
Shrivelled globe	8	6	2	...	...	...	...
Nystagmus	1	1	...	...	...	...	...
DISEASES OF APPENDAGES OF EYE AND ORBIT:							
Trichiasis	1	...	1	...	...	...	...
Ectropion	1	1	...	...	...	...	...
Chancre of eyelid	1	...	1	...	...	...	...
Molluscum of eyelid	1	...	1	...	...	...	...
Congenital cyst of orbit	1	...	1	...	...	...	...
Strabismus	2	2	...	...	...	...	...
DISEASES OF THE EAR:							
Otorrhœa (strumous)	2	...	1	...	...	...	1
Polypus	1	1	...	...	...	...	...
DISEASES OF THE NOSE:							
Cyst (congenital)	1	1	...	...	...	...	...
Polypus	2	1	1	...	...	...	...
DISEASES OF THE CIRCULATORY SYSTEM:							
Morbus cordis	1	1	...	...	...	...	...
Aneurism (abdominal)	1	1	...	...	...	...	...
„ (popliteal)	1	1	...	...	...	...	...
„ (circoid)	1	1	...	...	...	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
DISEASES OF THE CIRCULATORY SYSTEM—*continued.*							
Nævus	1	1	...	...	...	...	...
Hæmophilia	3	3	...	...	...	...	...
Anæmia	1	...	1	...	...	...	...
Syncope	1	1	...	...	...	...	...
Phlebitis	3	1	2	...	...	...	...
Varicose veins	2	2	...	...	...	...	...
DISEASES OF THE RESPIRATORY SYSTEM:							
Phthisis	3	3	...	...	...	...	...
Bronchitis	2	1	...	1	...	...	...
Pneumonia	3	1	1	...	1	...	...
Empyema	1	...	1	...	...	...	...
DISEASES OF THE ABSORBENT SYSTEM:							
Vessels:							
Inflammation	1	1	...	...	...	...	..
Glands:							
Inflammation	4	3	1	...	...	...	...
Abscess	15	5	9	...	...	1	...
DISEASES OF THE DIGESTIVE SYSTEM:							
Lips:							
Epithelioma	1	1	...	...	...	...	...
Mouth:							
Stomatitis (ulcerative)	1	...	1	...	...	...	...
Ulceration (syphilitic)	1	1	...	...	...	...	...
Gums and Jaws:							
Alveolar abscess	2	1	1	...	...	...	...
Necrosis	4	1	2	...	...	1	...
Tongue:							
Epithelioma	4	2	1	1	...	...	...
Intestines:							
Hernia:							
Reducible	12	6	5	1	...	...	...
Irreducible	3	2	...	...	1	...	...
Incarcerated	1	1	...	...	...	...	...
Congenital	4	3	...	...	...	1	...
Strangulated:							
Inguinal	1	...	...	1	...	...	...
Femoral	4	1	1	...	1	...	1
Umbilical	1	...	...	1	...	...	...
Stricture of pylorus	1	1	...	...	...	...	...
Colic	1	...	1	...	...	...	...
Constipation	3	1	2	...	...	...	...
Rectum and Anus:							
Carcinoma	2	...	1	...	1	...	...
Ulcer	1	1	...	...	...	...	...
Stricture (syphilitic)	2	1	1	...	...	...	...
Polypus	1	1	...	...	...	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
DISEASES OF THE DIGESTIVE SYSTEM:							
Rectum and Anus—continued.							
Recto-vesical fistula	1	1	...	...	...	...	...
Fissure	1	...	1	...	...	...	...
Fistula	21	13	5	2	...	1	...
Hæmorrhoids	9	7	1	...	...	...	1
Prolapsus	1	...	1	...	...	...	...
DISEASES OF THE URINARY ORGANS:							
Kidney:							
Calculus	2	...	1	...	...	...	1
Bladder:							
Catarrh	1	1	...	...	...	...	...
Cystitis	1	...	...	...	...	1	...
Calculus	2	1	1	...	...	...	...
Hæmaturia	2	1	1	...	...	...	...
Incontinence	3	1	2	...	...	...	...
Retention	5	4	1	...	...	...	...
Gonorrhœa and its Complications:							
Gonorrhœa	4	...	4	...	...	...	...
Venereal warts	2	...	2	...	...	...	...
Mucous tubercles	3	1	1	...	...	1	...
Bubo	1	1	...	...	...	...	...
Orchitis (acute)	4	4	...	...	...	...	...
Rheumatism	2	1	1	...	...	...	...
Urethra:							
Stricture	22	21	...	1	...	...	...
Calculus (impacted)	1	1	...	...	...	...	...
Penholder (impacted)	1	1	...	...	...	...	...
Fistulæ	2	1	...	...	...	1	...
DISEASES OF GENERATIVE SYSTEM:							
MALE:							
Penis:							
Phimosis (congenital)	3	3	...	...	...	...	...
Suppurating sore	2	2	...	...	...	...	...
Scrotum:							
Abscess	1	1	...	...	...	...	...
Tunica vaginalis:							
Hydrocele	4	4	...	...	...	...	...
Hæmatocele	1	1	...	...	...	...	...
Cord:							
Varicocele	6	6	...	...	...	...	...
FEMALE:							
Ovary:							
Cyst	4	...	2	...	2	...	...
Uterus:							
Retroversion	1	...	1	...	...	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
DISEASES OF GENERATIVE SYSTEM:							
FEMALE—*continued.*							
Vulva:							
Venereal warts	2	...	2	...	...	...	...
Abscess of labium	2	...	2	...	...	...	...
Coccydynia	1	...	1	...	...	...	...
Breast:							
Scirrhus	13	...	9	...	3	...	1
,, (recurrent)	2	...	2	...	...	...	...
Adenoma	1	...	1	...	...	...	...
Fibroma	1	...	1	...	...	...	...
Cystic sarcoma	2	...	2	...	...	...	...
Abscess	2	...	2	...	...	...	...
DISEASES OF BONES:							
Periostitis (acute):							
Tibia	2	...	2	...	...	...	...
Osteitis:							
Femur	1	...	...	...	...	1	...
Tibia	2	1	...	...	...	...	1
Necrosis:							
Temporal bone (petrous)	1	1	...	...	...	...	...
,, (mastoid)	1	...	...	1	...	...	...
Jaw	4	1	2	...	...	1	...
Clavicle	1	1	...	...	...	...	...
Scapula	3	1	1	..	...	...	1
Ribs	1	...	...	...	...	1	...
Phalanges (fingers)	4	1	2	...	...	1	...
Ilium	1	...	1	...	...	...	...
Femur	9	3	2	1	1	1	1
Tibia	4	3	1	...	...	...	...
Fibula	1	1	...	...	...	...	...
Stump	1	1	...	...	...	...	...
Phalanges (toes)	1	1	...	...	...	...	...
Caries:							
Spine:							
Cervical	2	...	1	1	...	...	...
Upper and middle dorsal	13	6	4	1	1	1	...
Lower dorsal	6	3	3	...	...	...	...
Dorso-lumbar	7	5	1	...	1	...	...
Lumbar	2	...	1	...	...	...	1
Metatarsal bone	2	1	1	...	...	...	...
Exostosis:							
Humerus	1	...	1	...	...	..	...
DISEASES OF JOINTS:							
Synovitis:							
i. Acute:							
Elbow	1	...	1	...	...	...	...
Knee	12	8	4	...	...	...	...
Ankle	1	...	...	...	...	1	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
DISEASES OF JOINTS—*continued.*							
ii. Chronic:							
Knee	10	6	4	...	...	...	...
Metatarso-phalangeal joint	1	1	...	...	...	...	...
Morbus coxæ	26	12	6	...	...	4	4
Arthritis:							
i. Acute:							
Knee	2	...	2	...	...	...	...
ii. Chronic:							
Elbow	1	1	...	...	...	...	...
iii. Strumous:							
Shoulder	1	1	...	...	...	...	...
Elbow	1	1	...	...	...	...	...
Wrist	1	1	...	...	...	...	...
Knee	15	7	6	1	...	1	...
Ankle	6	3	1	...	...	1	1
Ankylosis:							
i. Fibrous:							
Elbow	3	3	...	...	...	...	...
Knee	3	1	1	...	...	...	1
ii. Bony:							
Elbow	1	...	...	...	...	1	...
Hip	1	...	...	...	...	1	...
DISEASES OF MUSCLES, FASCIÆ, AND TENDONS:							
Lateral curvature of spine	9	2	7	...	...	...	...
Cyphosis	1	...	1	...	...	...	...
Contracted tendons	1	1	...	...	...	...	...
Thæcal abscess	4	3	1	...	...	...	...
Ganglion	1	1	...	...	...	...	...
Bursæ:							
Inflammation:							
i. Acute:							
Olecranon	1	1	...	...	...	...	...
Patella	3	...	3	...	...	...	...
ii. Sub-acute and chronic:							
Patella	7	...	7	...	...	...	...
Great toe	1	1	...	...	...	...	...
DISEASES OF SKIN AND SUBCUTANEOUS TISSUE:							
Cellulitis:							
Upper limb	4	3	...	...	1	...	...
Pelvic	1	...	...	...	1	...	...
Lower limb	5	4	1	...	...	...	...
Abscess:							
i. Acute:							
Shoulder	2	1	1	...	...	...	...
Arm	3	3	...	...	...	...	...
Elbow	1	1	...	...	...	...	...
Buttock	3	1	2	...	...	...	...

TABLE I—*continued.*

DISEASES.	Total.	Discharged.		Died.		In hosp. 31st Dec.,'84	
		M.	F.	M.	F.	M.	F.
DISEASES OF SKIN AND SUBCUTANEOUS TISSUE:							
Abscess—*continued.*							
Perinæum	3	3	...	...	...	...	...
Thigh	2	2	...	...	...	...	...
Knee	3	2	1	...	...	...	...
i. Acute:							
Calf	2	2	...	...	...	...	...
Ankle	2	2	...	...	...	...	...
Foot	2	2	...	...	...	...	...
ii. Chronic:							
Jaw	1	1	...	...	...	...	...
Chest	2	1	1	...	...	...	...
Elbow	1	...	1	...	...	...	...
Abdominal wall	2	1	1	...	...	...	...
Loin	1	...	1	...	...	...	...
Under gluteus maximus	1	...	...	1	...	...	...
Groin	1	1	...	...	...	...	...
Thigh	1	1	...	...	...	...	...
Foot	1	...	...	...	..	1	...
Gangrene (moist)	3	1	...	1	1	...	...
" (dry)	1	...	...	...	1	...	...
Sinuses:							
Neck	1	1	...	...	...	...	...
Thigh	1	...	..	...	...	...	1
Ulcers:							
i. Simple:							
Thigh	1	...	1	...	...	...	...
Leg	4	3	1	...	...	1	...
Foot	2	2	...	...	...	...	...
ii. Syphilitic:							
Leg	2	1	1	...	...	...	...
iii. Varicose:							
Leg	2	2	...	...	...	...	...
iv. Traumatic:							
Leg	3	1	1	...	...	1	...
Anthrax	1	...	1	...	...	...	...
Eczema	8	3	5	...	...	...	...
Scabies	1	1	...	...	...	...	...
Ecthyma	1	1	...	...	...	...	...
Rupia (syphilitic)	4	4	...	...	...	...	...
Psoriasis	2	2	...	...	...	...	...
Lupus	1	...	1	...	...	...	...
Elephantiasis	2	...	1	1	...	...	...
Leprosy (tubercular)	1	...	...	...	...	1	...
Ingrowing toe-nail	1	...	1	...	...	...	...
UNCLASSIFIED:							
Inflamed face	1	...	1	...	...	...	...
Œdema of arm	1	1	...	...	...	...	...
Pain in back	1	1	...	...	...	...	...
Nil	2	2	...	...	...	...	...

TABLE I—*continued.*

INJURIES.	Total.	Discharged.		Died.		In hosp. 31st Dec., '84	
		M.	F.	M.	F.	M.	F.
Burns:							
General	2	1	...	1	...	...	...
Local	9	2	5	...	...	...	2
Scalds	5	3	1	...	...	...	1
Contusions (general)	7	5	2	...	...	...	...
Immersion (attempted suicide)	2	...	2	...	...	...	...
„ (accidental)	1	...	1	...	...	...	...
Of head:							
Contusions	4	1	3	...	...	...	...
Scalp wounds (contused)	12	8	4	...	...	...	...
Fracture (frontal)	1	...	...	...	...	1	...
„ (parietal)	1	...	...	...	...	1	...
„ (base)	6	2	...	2	2	...	...
Concussion of brain	16	14	2	...	...	...	...
Of face:							
Fracture of lower jaw	1	1	...	...	...	...	...
Of nose:							
Wound (contused)	1	...	...	...	...	...	1
Of eye:							
Contusion	4	3	1	...	...	...	...
Of back:							
Contusion	4	3	1	...	...	...	...
Wound (punctured)	1	1	...	...	...	...	...
Concussion of spine	1	...	1	...	...	...	...
Sprain	1	...	1	...	...	...	...
Of chest:							
Contusion	3	1	2	...	...	...	...
Wound (incised)	1	1	...	...	...	...	...
Fracture:							
Ribs	8	3	3	...	...	2	...
Of abdomen:							
Contusion	7	5	2	...	...	...	...
Of pelvis and genitals:							
Fracture	1	1	...	...	...	...	...
Wound (contused):							
Vagina	1	...	1	...	...	...	...
Labium	2	...	2	...	...	...	...
Scrotum	2	2	...	...	...	...	...
Of upper extremity:							
Contusions	5	2	3	...	...	...	...
Wounds (contused)	1	...	1	...	...	...	...
„ (incised)	3	3	...	...	...	...	...
„ (lacerated)	4	3	...	...	...	...	1
„ (punctured)	1	1	...	...	...	...	...
„ (gun-shot)	1	1	...	...	...	...	...
Crushed hand	1	...	...	1	...	...	...
„ fingers	5	5	...	...	...	...	...
Fractures:							
Clavicle	3	2	1	...	...	...	...
Humerus	1	...	1	...	...	...	...
Ulna (ununited)	1	1	...	...	...	...	...
Phalanx (compound)	1	1	...	...	...	...	...

TABLE I—*continued.*

INJURIES.	Total.	Discharged.		Died.		In hosp. 31st Dec.,'84	
		M.	F.	M.	F.	M.	F.
Of upper extremity—*continued.*							
Dislocations:							
Humerus (sub-coracoid)	1	...	1	...	...	...	...
Of lower extremity:							
Contusions	18	10	8	...	...	...	...
Wounds (contused)	5	3	1	...	...	...	1
„ (incised)	1	...	1	...	...	...	...
„ (lacerated)	2	2	...	...	...	...	...
„ (punctured)	4	4	...	...	...	...	...
„ (gun-shot)	1	...	...	...	...	1	...
Sprained ankle	9	7	2	...	...	...	...
Crushed toes	1	1	...	...	...	...	...
Fractures:							
Femur (intra-capsular)	3	1	1	...	...	...	1
„ (upper third)	1	...	1	...	...	...	...
„ (middle)	10	8	1	...	...	1	...
„ (lower third)	1	...	...	...	...	1	...
Patella (transverse)	3	2	...	...	...	1	...
„ rupture of ligament	1	1	...	...	...	...	...
Tibia (middle)	5	4	1	...	...	...	...
„ (lower third)	9	6	2	...	...	1	...
Fibula (middle)	1	1	...	...	...	...	...
„ (lower third)	11	10	1	...	...	...	...
Tibia and fibula (middle)	3	1	1	...	...	1	...
„ (lower third)	8	4	2	...	...	...	2
„ „ with fractured femur	1	1	...	...	...	...	...
Potts'	3	...	3	...	...	...	...
Tibia and fibula (middle), Colles'	1	1	...	...	...	...	...
„ (ununited)	1	1	...	...	...	...	...
Compound, of tibia and fibula (lower third)	2	2	...	...	...	...	...
„ „ (old case)	2	2	...	...	...	...	...
Compound comminuted, complicated of tibia and fibula	1	1	...	...	...	...	...
Os calcis	1	1	...	...	...	...	...
„ comminuted compound fracture of radius and ulna	1	...	...	...	...	1	...
Dislocations:							
Hip	2	...	...	...	...	2	...
„ (old)	1	...	1	...	...	...	...
Astragalus	2	2	...	...	...	...	...

Table II.—*Operations.*

Operations.	Total.	Discharged.		Died.		In hosp. 31st Dec., 1884.		Remarks.
		M.	F.	M.	F.	M.	F.	
Head and Neck:								
For circoid aneurism of scalp	1	1	...	...	...	...	...	Ligatured and excised.
„ epithelioma of tongue	2	1	...	1	...	...	...	Excision.
„ „ lip	1	1	...	...	...	...	...	
„ „ submaxil. glands	2	2	...	...	...	...	...	
„ congenital cyst of orbit	1	1	...	...	...	...	...	
„ „ neck	1	1	...	...	...	...	...	
„ sebaceous cyst of lower jaw	1	...	1	...	...	...	...	
„ naso-pharyngeal polypus	1	1	...	...	...	...	...	
„ polypus of ear	1	1	...	...	...	...	...	
„ nævus of face	1	1	..	...	...	...	...	
„ „ neck	1	1	...	...	...	...	...	
„ papilloma of chin	1	1	...	...	...	...	...	
„ malignant disease of larynx	1	...	...	...	...	1	...	Laryngotomy.
„ diphtheria	1	1	...	...	...	...	...	
Plastic Operations:								
For hare-lip and cleft palate	3	2	1	...	...	...	...	
„ cleft palate	1	...	1	...	...	...	...	
„ harelip	3	1	2	...	...	...	...	
„ ectropion	1	1	...	...	...	...	...	
Eyes:								
For nævoid tumour of orbit	1	...	1	...	...	...	...	Removal.
„ trichiasis	1	...	1	...	...	...	...	Excision of bulbs.
„ cataract	4	4	...	...	...	...	...	2 extraction, 2 needle.
„ dislocated lens	1	1	...	...	...	...	...	Extraction.
„ strabismus	2	1	1	...	...	...	...	
Iridectomy	6	5	1	...	...	...	...	
Excision of globe	8	6	2	...	...	...	...	
Thoracic Region:								
For necrosis of rib	1	...	...	...	...	1	...	Sequestrum removed.
„ cyst of chest wall	1	1	...	...	...	...	...	
„ scirrhus of breast	11	...	8	...	2	...	1	Ablation of breast.
„ „ (recurrent)	2	...	2	...	...	...	...	
„ cystic sarcoma of breast	2	...	2	...	...	...	...	Ablation of breast.
Abdominal Region:								
For spina bifida	1	1	...	...	...	...	...	
Gastrostomy	1	...	...	...	1	...	...	
Colotomy	2	...	...	1	1	...	...	1 malignant disease of rectum, 1 congenital absence of rectum.
Ovariotomy	2	...	1	...	1	...	...	
For the radical cure of hernia	4	3	...	...	...	1	...	
„ strangulated umbilical hernia	1	...	...	1	...	...	...	
„ „ inguinal hernia	1	...	...	1	...	...	...	
„ „ femoral hernia	3	1	...	...	1	...	1	

TABLE II—*continued.*

OPERATIONS.	Total.	Discharged.		Died.		In hosp. 31st Dec., 1884.		Remarks.
		M.	F.	M.	F.	M.	F.	
ABOUT RECTUM AND ANUS:								
For stricture of rectum	1	...	1	...	...	...	...	Dilated.
„ ulcer of rectum	2	2	...	...	...	...	...	
„ hæmorrhoids	6	6	...	...	...	...	...	
„ fistula in ano	13	8	2	...	1*	...	2	* Erysipelas of head.
„ condylomata	1	...	1	...	...	...	...	
ON THE GENITO-URINARY ORGANS:								
For renal calculus	1	...	...	...	...	...	1	Nephrotomy.
„ vesical calculus	4	2	2	...	...	...	...	2 lithotrity, 1 lateral lithotomy, 1 median lithotomy.
„ congenital phimosis	4	3	...	1*	...	...	...	* General tuberculosis.
„ stricture of the urethra	12	10	...	1	...	1	...	5 Holted, 3 forcibly dilated, 1 internal urethrotomy, 3 perineal section.
„ varicocele	6	6	...	...	...	...	...	
„ hydrocele	4	4	...	...	...	...	...	Radical cure.
„ removal of penholder from urethra	1	1	...	...	...	...	...	
ON UPPER LIMB:								
For strumous disease of shoulder	1	1	...	...	...	...	...	
„ sebaceous tumour of shoulder	1	...	1	...	...	...	...	
„ lipoma of shoulder	1	...	1	...	...	...	...	
„ necrosis of scapula	2	1	1	...	...	...	...	
„ bony ankylosis of elbow	2	1	...	...	...	1	...	Excision in each case.
„ strumous disease of elbow	2	1	...	...	...	1	...	Ditto.
„ ununited fracture of ulna	1	1	...	...	...	...	...	
„ contracted finger	1	...	1	...	...	...	...	
ON LOWER LIMB:								
For old dislocation of hip	1	...	1	...	...	...	...	Excision.
„ morbus coxæ	6	3	1	...	...	2	...	Excision in each case.
„ sciatica	2	2	...	...	...	...	...	Nerve stretching.
„ necrosis of femur	5	3	1	1*	...	...	...	Sequestra removed in each case; * afterwards amputated at hip-joint.
„ lipoma of knee	1	...	1	...	...	...	...	
„ consolidated bursa patellæ	3	...	3	...	...	...	...	Excised in each case.
„ fractured patella	1	1	...	...	...	...	...	Wired antiseptically.
„ strumous disease of knee	6	5	1	...	...	...	...	1 thermo-cautery, 2 excision of patella, 3 excision of joint.
„ fibrous ankylosis of knee	3	1	2	...	...	...	...	

TABLE II—*continued.*

OPERATIONS.	Total.	Discharged.		Died.		In hosp. 31st Dec., 1884.		Remarks.
		M.	F.	M.	F.	M.	F.	
ON LOWER LIMB—*continued.*								
For genu valgum	3	1	2	...	...	...	...	Ogston's operation.
„ varicose veins	2	2	...	...	...	...	...	Acu-pressure.
„ bow-legs	2	...	2	...	...	...	...	Osteotomy of tibiæ.
„ osteitis of tibia	1	...	1	...	...	...	...	Linear osteotomy.
„ acute necrosis of tibia	1	1	...	...	...	...	...	Excision.
„ chronic necrosis of tibia	2	2	...	...	...	...	...	
„ chronic necrosis of stump	1	1	...	...	...	...	...	
„ strumous disease of ankle	3	2	1	...	...	...	...	1 excision, 2 gouging.
„ dislocation of astragalus	1	1	...	..	...	...	...	Excision.
„ talipes varus	3	2	1	...	...	...	...	1 excision of tarsal arch, 1 osteotomy of os calcis, 1 tenotomy.
„ ingrowing toe-nail	1	...	1	...	...	...	...	
AMPUTATIONS:								
At shoulder-joint	1	...	1	...	...	...	...	Severe burn.
At middle of upper arm	1	1	...	...	...	...	...	Railway accident.
Of half the hand	1	...	...	1	...	...	...	Machine accident; death from acute bronchitis.
Of fingers	12	8	3	...	...	1	...	
At hip-joint	3	1	...	1	...	...	1	
At upper third of thigh	3	2	...	...	...	1	...	
At middle third of thigh	4	2	2	...	...	...	...	
At lower third of thigh	1	...	...	1	...	...	...	
At knee-joint	2	2	...	...	...	...	...	1 for gangrene of foot, followed by amputation of thigh; 1 for ununited fracture of tibia and fibula.
At upper third of leg	1	1	...	...	...	...	...	
At lower third of leg	1	...	...	...	...	1	...	
Of foot (Symes')	1	...	...	...	...	...	1	
Of toes	4	2	2	...	...	...	...	

TABLE III.—*Cases of Infectious Disease during the year* 1884.

No.	Sex.	Age.	Date of admission.	Disease for which admitted.	Hospital disease.	Result and date.	Fol. in Register.
1	M.	32	March 12th	Erysipelas of neck	Erysipelas	Death, March 16th	38
2	F.	43	April 25th	„ face	„	Relieved, May 7th	58
3	M.	62	June 15th	Gluteal abscess	Pyæmia	Death, June 27th	89
4	M.	46	July 10th	Punctured wound of hand	Erysipelas	Relieved	109
5	F.	26	September 22nd	Necrosis of femur	Septicæmia	Death	141
6	F.	33	October 7th	Fistula in ano	Erysipelas	„ October 29th	149
7	M.	7	„ 14th	Erysipelas of leg	„	Relieved	154
8	M.	61	„ 16th	„ „	„	„ February 8th, 1885	155
9	F.	35	November 11th	Gumma	„	„ January 30th, 1885	167
10	F.	40	„ 23rd	Wound of wrist; erysipelas	„	„ „ 28th, 1885	168

REPORT ON CASES IN "ARDEN WARD"

(FOR DISEASES OF WOMEN)

DURING THE YEAR 1884.

By RICHARD E. GENGE.

Number of patients under treatment, January 1st, 1884		9
" " admitted during the year		87
Total		96
Number of patients discharged during the year:		
Cured or relieved	71	
Unrelieved	4	
		75
" " who died*		5
" " transferred to surgical wards		2
" " " medical wards		5
" " under treatment, December 31st, 1884		9
Total		96

Re-admissions within the year are not counted as separate cases unless suffering from a different affection.

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* 1 from pelvic hæmatocele, 1 from uræmia, 1 from encephaloid cancer of the liver, 2 from epithelioma of the cervix.

Cases in "Arden Ward."

Nature of disease.	No. of case.	Initials.	Age.	Result.	No in register.	Remarks, treatment, &c.
Perinæum (laceration of) .	I	M. G.	40	Relieved	G. 82	Second operation. Edges pared; quilled suture; silver wire.
	II	M. S.	36	„	G. 116	Complicated with rectocele. Operation same as above.
	III	E. E.	20	„	H. 110	Operated on by Dr. Grigg. Deep and superficial sutures of waxed silk.
	IV	R. C.	63	„	H. 214	Was not operated. Ring pessary introduced.
	V	A. J.	29	„	H. 211	Quilled suture; silver wire.
Clitoris (hypertrophy of) .	I	L. H.	33	„	H. 124	Pedunculated tumour, about the size of a fœtal head. Had been growing 11 years. Supposed to be due to a kick. Removed by chain écraseur. Great hæmorrhage, controlled by ligature and actual cautery. Elephantiasis.
Labia (abscess of) . .	I	L. B.	24	„	G. 205	
	II	J. B.	18	„	H. 186	
	III	M. M.	29	„	H. ?	
Vascular growth of urethra	I	L. A.	69	„	H. 92	Actual cautery to control hæmorrhage.
	II	E. W.	34	„	H. 171	Glycero-carbolic acid (1 in 4½).
Retention of urine . .	I	E. J.	23	„	H. 1	Hst. quiniæ.
	II	R. W.	27	„	H. 114	
Vaginismus . . .	I	A. A.	19	„	H. 8	Vagina dilated while patient was under chloroform, and a large speculum introduced, which was removed and re-inserted every 36 hours.
Vesico-vaginal fistula .	I	L. R.	22	Unrelieved	G. 143	Hole ¾ of an inch across in anterior wall of vagina. Edges of fistula hard and cartilaginous, resisting all attempts at approximation.
Leucorrhœa . . .	I	A. H.	33	Relieved	H. 118	
	II	S. W.	40	„	H. 191	
Disorders of Menstrual Function:						

a. Dysmenorrhœa . .	I	S. J.	26	„	G. 145	Os and cervix incised antero-posteriorly with Simpson's metrotome.
	II	M. F.	30	„	H. 112	
	III	S. T.	29	„	H. 116	
b. Menorrhagia . .	I	S. R.	26	„	G. 190	Ergot. Was treated here for same complaint 3 years ago.
	II	E. P.	34	„	G. 221	After abortion.
	III	E. S.	31	„	H. 14	Uterus ante-flexed.
	IV	E. M.	20	„	H. 42	Following abortion.
	V	R. W.	26	„	H. 133	4½ months after abortion.
	VI	S. B.	38	„	H. 176	
	VII	J. D.	35	„	H. 220	Hypodermic injection: Taurêt's ergotinine, ♏v twice a day.
	VIII	A. G.	36	„	H. ?	
	IX	L. E.	29	„	H. ?	
UTERUS:						
a. Ulceration of cervix .	I	A. S.	35	„	H. 137	Actual cautery.
b. Subinvolution . .	I	M. B.	31	„	G. 193	Ergot.
	II	E. C.	35	„	H. 126	Ergot and iron.
	III	M. L.	36	„	H. 163	
	IV	E. N.	37	„	H. 204	
c. Retroflexion . .	I	E. G.	35	„	G. 173	Modified Hodge's pessary.
	II	A. W.	26	„	G. 177	
	III	P. R.	34	„	G. 187	Oval pessary.
	IV	E. P.	32	„	G. 213	Oval pessary.
	V	A. P.	30	„	G. 231	Hodge's pessary.
	VI	L. L.	20	„	H. 28	Pessary.
	VII	E. C.	26	„	H. 74	Hodge's pessary.
	VIII	A. J.	23	„	H. 144	Oval pessary.
	IX	L. S.	24	„	H. 224	
d. Retroversion . .	I	S. A. P.	29	„	H. 78	
	II	J. G.	38	„	H. 98	Hodge's pessary.
	III	F. W.	26	„	H. 108	Oblong pessary.
e. Prolapse . . .	I	M. C.	27	„	G. 157	Third degree. Ring pessary.
	II	H. R.	51	„	H. 148	Third degree. Posterior colporrhaphy.
	III	G. B.	32	Recovered	H. 118	3 months pregnant.

CASES IN "ARDEN WARD"—*continued.*

Nature of disease.	No. of case.	Initials.	Age.	Result.	No. in register.	Remarks, treatment, &c.
UTERUS—*continued.*						
f. Fibroid . . .	I	S. G.	47	Relieved	G. 199	Tumour in anterior wall about size of a small orange.
	II	J. W.	36	„	G. 237	Glycerate of ergot hypodermically (♏x). Anterior wall of cervix incised.
	III	L. S.	42	„	H. 122	Taurêt's ergotinine.
	IV	A. H.	39	„	H. 152	Impacted. Stem pessary.
	V	E. H.	40	„	H. 207	Same as last case.
g. Polypoid . . .	I	J. P.	54	„	H. 46	Écraseur (wire rope).
	II	C. C.	40	„	H. 88	Same as last case.
	III	S. B.	41	„	H. 102	Tumour weighed 5½ ounces. Écraseur and scissors.
h. Retained placenta .	I	H. R.	27	„	H. 140	Miscarriage 3 weeks before admission.
	II	C. M.	39	„	H. 129	Miscarriage after a fall downstairs.
i. Malignant disease .	I	A. P.	34	Died	G. 112	Epithelioma; parotid bubo. P.M.—Uterus and ligaments matted together by masses of malignant deposit.
	II	H. R.	53	Unrelieved	G. 38	Epithelioma. Amputation of cervix.
	III	F. H.	42	„	G. 203	Portions of growth removed by spoon. Actual cautery.
	IV	M. J.	47	„	H. 61	
	V	F. R.	43	Relieved	H. 84	Curettes. Actual cautery.
	VI	A. S.	35	„	H. 137	Actual cautery.
	VII	M. H.	32	„	H. 168	Actual cautery. Epithelioma.
	VIII	L. H.	42	„	H. 194	Cauliflower excrescence of cervix. Écraseur.
	IX	R. B.	38	Died	H. ?	
	X	J. S.	46	Relieved	H. ?	
Missed abortion . .	I	E. S.	31	„	G. 223	Os dilated with seatangle tents. Placenta and fœtus removed.
Abortion	I	A. A.	20	Recovered	H. 199	Sent up as a case of abdominal tumour. Aborted in ward. Child lived nearly two hours. Sixth month.
OVARIES:						
a. Chronic ovaritis . .	I	A. G.	33	Relieved	G. 153	
	II	J. L.	30	„	G. 169	

b. Ovarian tumour . .	I	A. W.	22	Still in hosp.	H. 216	Tumour fills abdomen. Circum. 30¾ inches. Fluctuation distinct.
PELVIS:						
a. Hæmatocele . .	I	E. R.	28	Relieved	G. 149	Precipitate labour 6 months previous to admission.
	II	N. F.	21	Died	G. 68	Ill 2 years. Patient died collapsed about 12 hours after removal of a large quantity (?) of very fœtid pus from cyst cavity.
	III	E. B.	49	Relieved	H. 24	Injury 5 years previous to admission.
	IV	F. R.	29	"	H. 30	
	V	A. H.	36	"	H. 94	
	VI	H. H.	42	"	H. 179	
b. Perimetritis (acute) .	I	A. W.	25	"	H. 38	Fomentations; enema of turpentine; quinine and opium.
	II	M. N.	26	"	H. 64	Same as above.
	III	E. C.	40	"	H. 184	After abortion.
" (chronic)	I	S. K.	44	"	G. 215	Hst. Pot. Bromid. c. Iodidi.
	II	A. O.	24	"	H. 10	Abdomen painted with tincture of iodine. Quinine internally.
c. Parametritis (acute) .	I	R. H.	20	"	G. 181	After birth of first child. Ruptured into vagina.
	II	C. O.	30	Transferred	H. 69	Developed pyæmia in ward. Was transferred to surgical side, where the right thigh was amputated on account of pyæmic abscess of the knee-joint.
" (chronic)	I	C. W.	42	Relieved	H. 160	
	II	A. S.	22	Transferred	H. 188	Developed acute rheumatism, and was transferred to Medical Ward.
Septicæmia . . .	I	S. B.	23	"	H. 160	Transferred to Medical Ward.
Uræmia	I	E. B.	28	Died	?	Died on night of admission.
Hysteria	I	F. B.	19	Relieved	H. 57	
	II	M.A.L.	39	"	H. 156	
Typhoid	I	M. L.	23	Transferred	?	Transferred to Medical Ward.
Neuro-mimesis . . .	I	A. W.	18	"	H. 4	Transferred to Medical Ward.
Encephaloid cancer of liver	I	C. S.	62	Died	G. 201	

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